



**Draft UNECE Interpretative
Brochure on Sweet Peppers –
Dec 08 + Mar09 ver1.1**

**Concerning the marketing and commercial quality
control of moving in international trade between and to
UNECE member countries.**

The text is based on UNECE Standard
FFV-28 document
TRADE/WP.7/2001/9/Add.3

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.
- *Sweet peppers come in a range of colours, sizes and shapes. Slides 2–4 show examples covered by this Standard.*
- *The following peppers are excluded from this Standard:*
 - *hot or chilli peppers*
 - *any peppers with a hot or spicy taste*

Note: Throughout this document the text in black normal Times New Roman reproduces provisions of the Standard, *the text in blue Italics interprets these provisions.*

I. Definition Of Produce

*Various sweet peppers covered by this Standard.
(photo 1) (photo 2)*



*Hot or chilli peppers are not covered by this Standard.
Any pepper with a hot or spicy taste is not covered by this Standard.*



New photo

I. Definition Of Produce

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

Elongated sweet peppers
(pointed) *(New photo)*



square sweet peppers (blunt)
(German photo 8)



I. Definition Of Produce

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

Square sweet peppers tapering
(peg top) (*German photo 39*)



Flat sweet peppers (tomato
peppers) (*German photo 12*).



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.
- *It is recommended that for those defects that are progressive the packer should be aware of likely deterioration during transportation and distribution.*

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

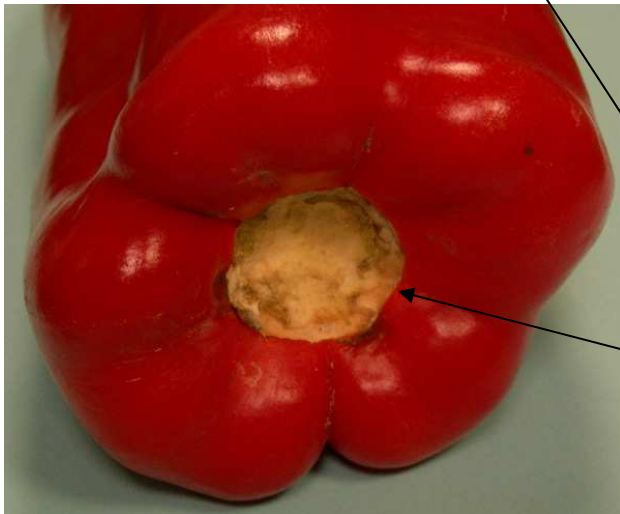
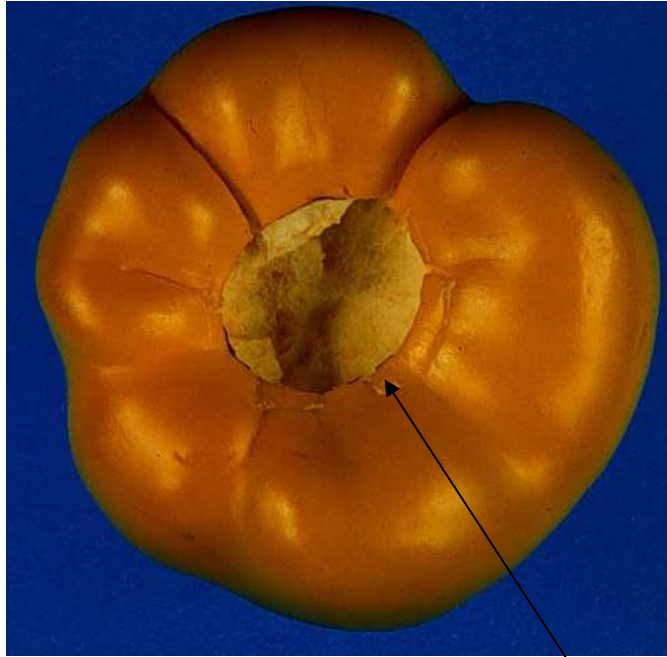
A. Minimum requirements

- - practically free from pests
- - free from damage caused by pests affecting the flesh
- - free from damage caused by low temperature or frost
- - 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.

A. Minimum requirements

- 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.

A. Minimum requirements



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 plus new).

A. Minimum requirements

1. Intact

*Holes in the fruit exposing the interior are not allowed.
(photo 24) (German photo 16)*



A. Minimum requirements



1. Intact

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

A. Minimum requirements

1. Intact



*Excessive sunburn, not acceptable
(photo 23) (German photo 37)*



*A. Minimum requirements

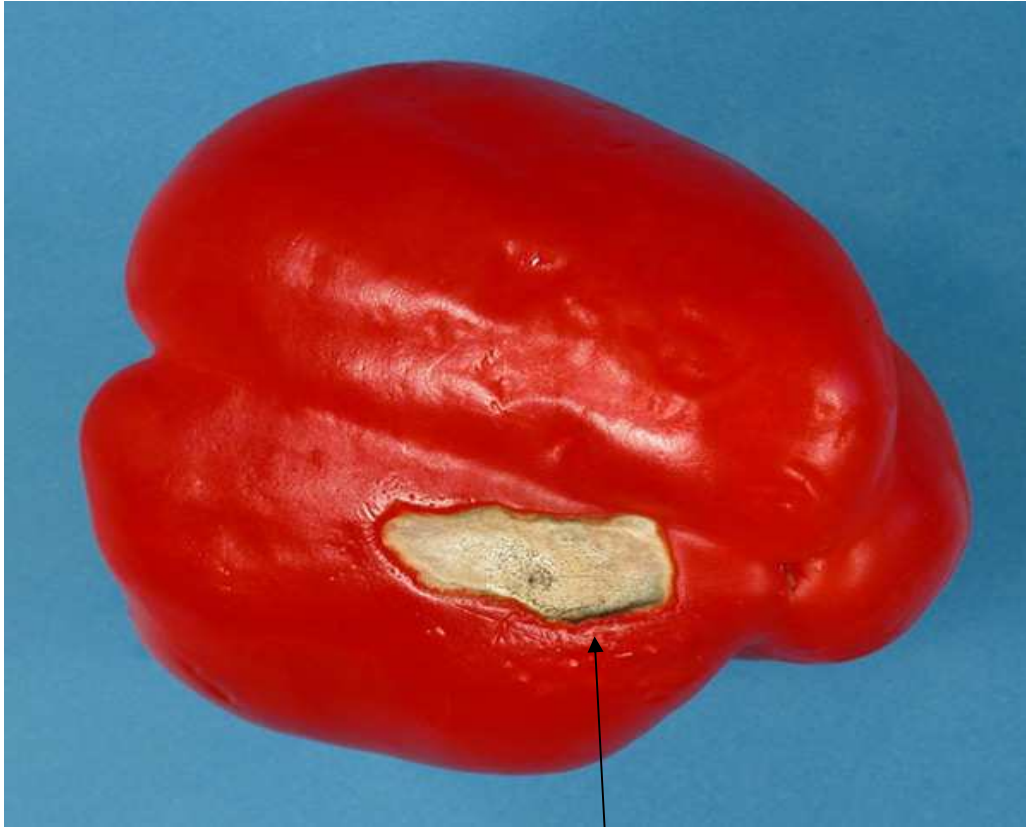


2. Sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded

*Excessive bruising
Not acceptable.*

*(Replacing photo
6).*

A. Minimum requirements

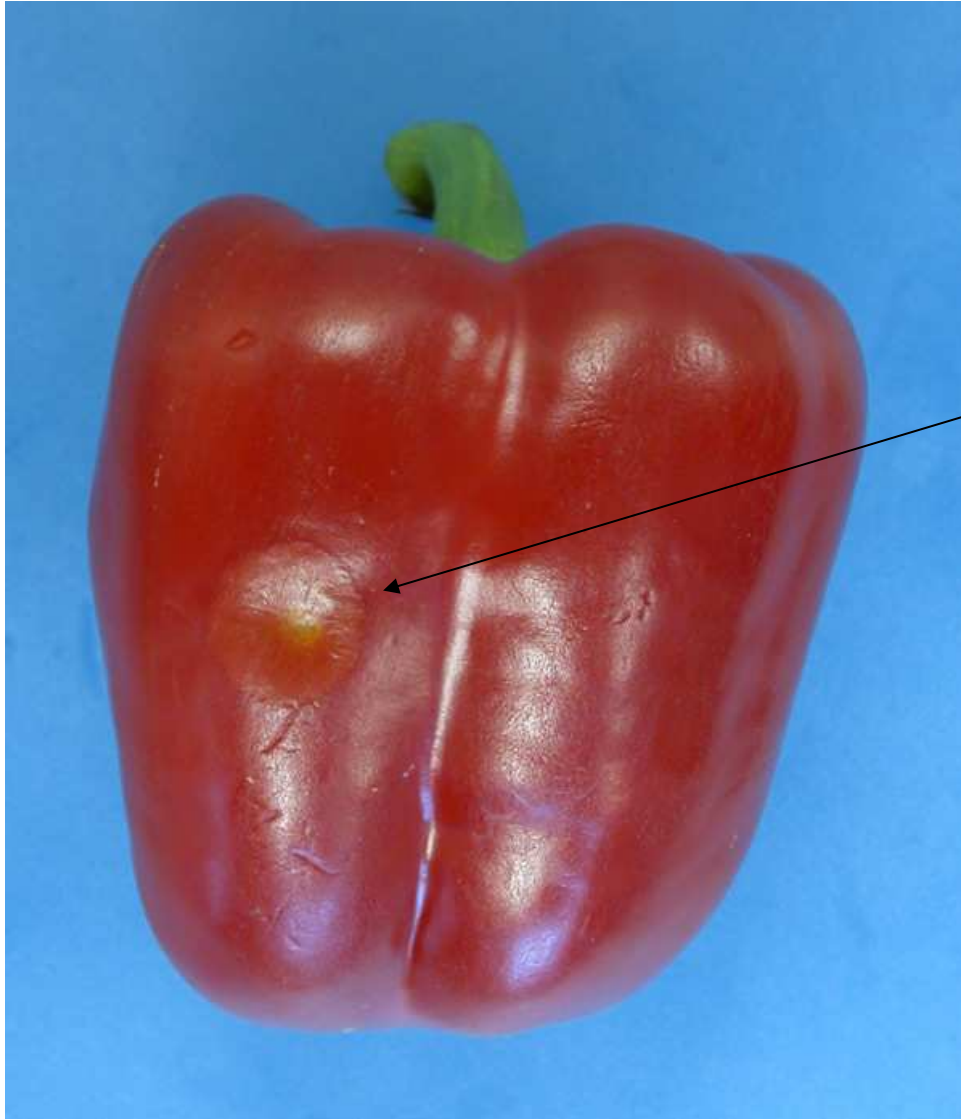


2. Sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded

The peppers must be free of any disease, rots or serious deterioration which appreciably affects their appearance, edibility or keeping quality.

Excessive blossom end dry deterioration not acceptable (photo 7). This is a physiological defect due to Calcium deficiency. Slight blossom end deterioration is allowed within the limits of Class II.

A. Minimum requirements



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

Very slight rot, not acceptable (photo 8).



German photo 20

A. Minimum requirements



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

Rot on the calyx and/or peduncle is not acceptable.

New German photo

A. Minimum requirements

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



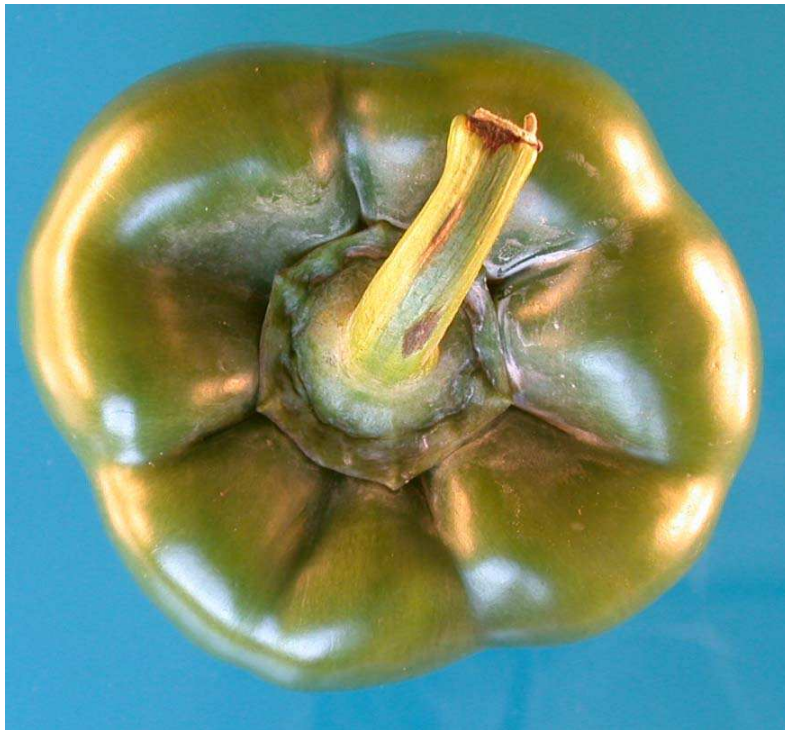
Pitting is a progressive physiological defect. It is recommended that at the packing stage grading be more restrictive for this defect.

(German photo 27).

A. Minimum requirements

3. Clean, practically free of any visible foreign matter

The peppers must be practically free of visible soil, dust, chemical residue or other foreign matter. Extensive soiling or any traces of inorganic deposits are not allowed.



Limit allowed for all classes (New photo) (German photo 29)

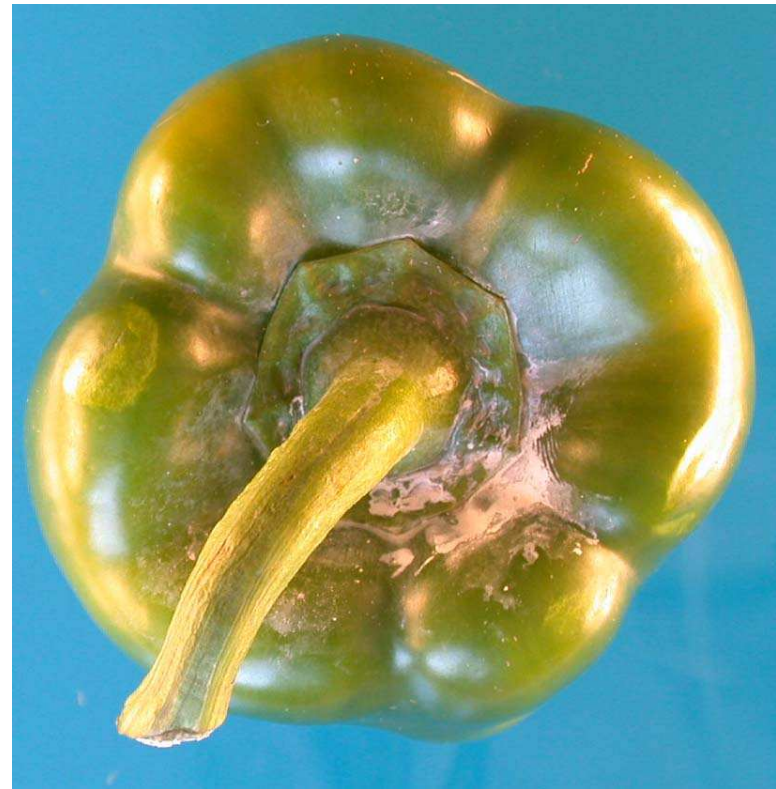
A. Minimum requirements

3. Clean, practically free of any visible foreign matter

The peppers must be practically free of visible soil, dust, chemical residue or other foreign matter. Extensive soiling or any traces of inorganic deposits are not allowed.

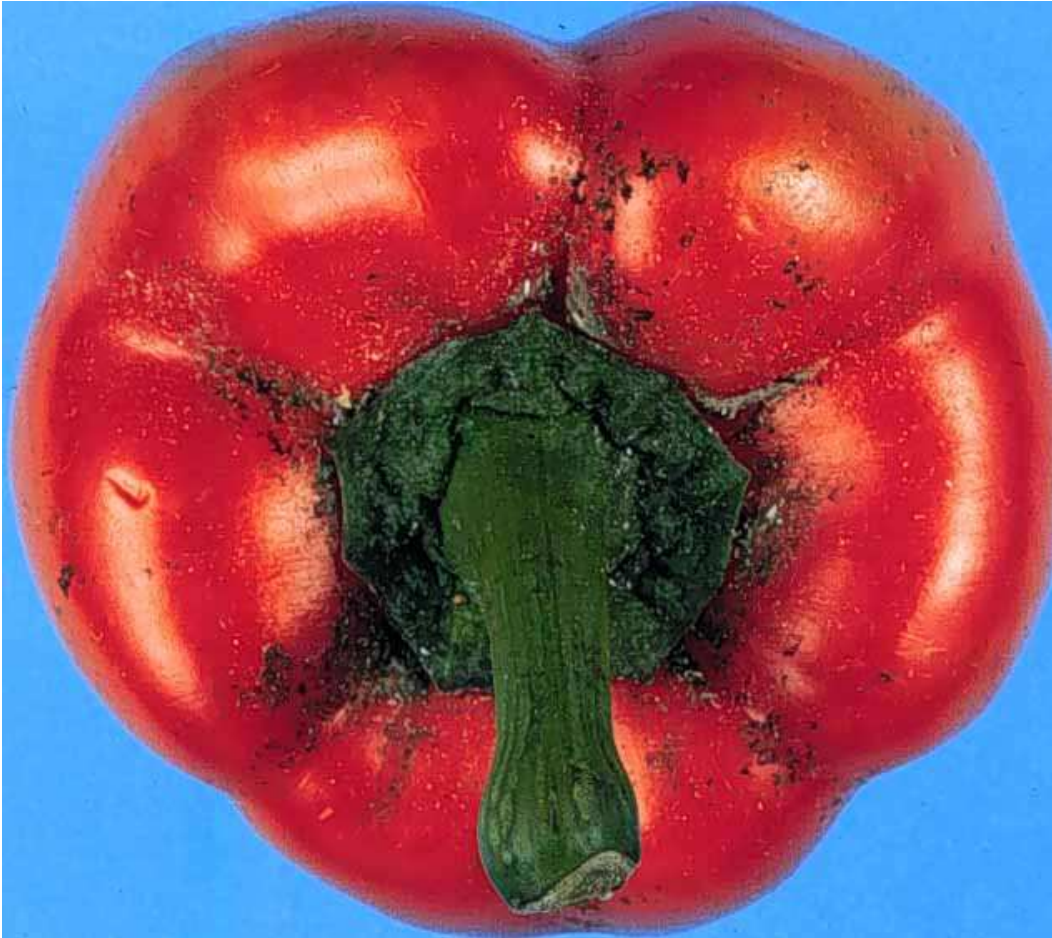


Evaporative deposits. Limit allowed for all classes



Excessive evaporative deposits – Not acceptable (Photo 40)

A. Minimum requirements



3. Clean, practically free of any visible foreign matter

Sooty mould left from aphid infestation is not acceptable (photos 13).

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

A. Minimum requirements



4. Fresh in appearance

The peppers must be of acceptable freshness.

A freshly harvested pepper or one from storage may be slightly soft,

Excessive shrivelling, not acceptable (photo 14).

A. Minimum requirements



6. Practically free from pests

The peppers must be free of pests.

*However, **not more than two small pests are allowed.** (photo 15).*

Add photo with 1 or 2 aphids as limit allowed)?

A. Minimum requirements



7. Free from damage caused by pests affecting the flesh

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

External pest damage, not acceptable (photo 16).

A. Minimum requirements

7. Free from damage caused by pests affecting the flesh

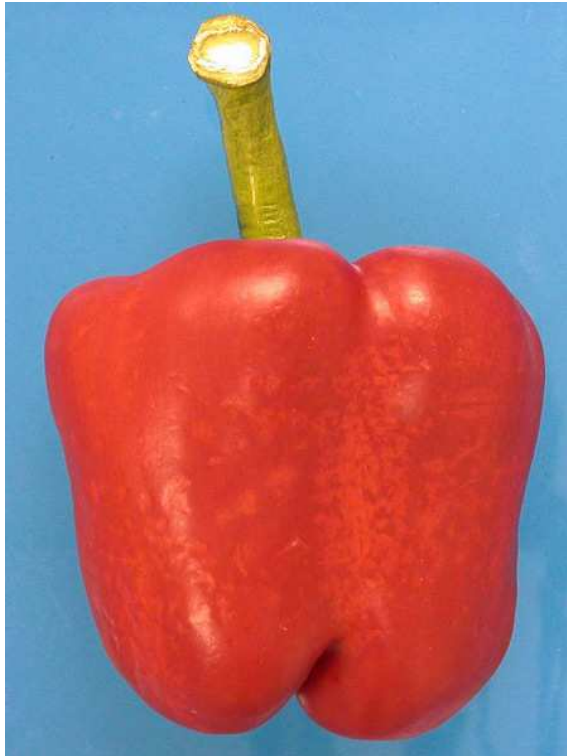


Internal pest damage, not acceptable (photo 17)

A. Minimum requirements

8. Free of damage caused by low temperature or frost

Damage caused by freezing is not allowed.



Excessive sunken glassy spots, caused by storage at just above 0°C, on the surface of sweet peppers are not allowed (photo 22).



Limit allowed up to 1/3 of the total surface area in Class II.

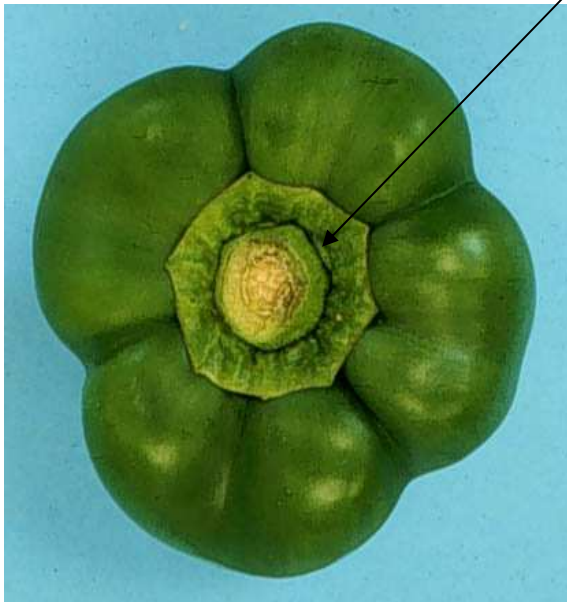
A. Minimum requirements

8. Free of damage caused by low temperature or frost ([German photos 35](#))



A. Minimum requirements

German
Photo 38



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

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

Limit allowed of damage to peduncle and calyx (photo 27)

A. Minimum requirements

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



*Excessive damage caused to the inedible calyx by pests.
(photo 18).*

A. Minimum requirements

10. 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.

11. Free of any foreign smell and/or taste

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

B. Classification

Sweet peppers are classified in three classes, defined below:

- “Extra” Class ?
- Class I
- Class II

B. Classification - “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.

Extra Class

- They must be free from defects, with the exception of very slight superficial defects



New photos



Slide 33

B. Classification - 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
- slight defects in colouring covering not more than 1/3 of the total surface area
- slight skin defects:
 - such as pitting, scratching, sunburn, pressure marks covering in total not more than 2 cm for defects of elongated shape, and 1 cm² for other defects
 - Or: slight dry superficial cracks covering in total not more than 1/8 of the total surface area.
- The peduncle may be slightly damaged.

B. Classification - Class I

1. A slight defect in shape

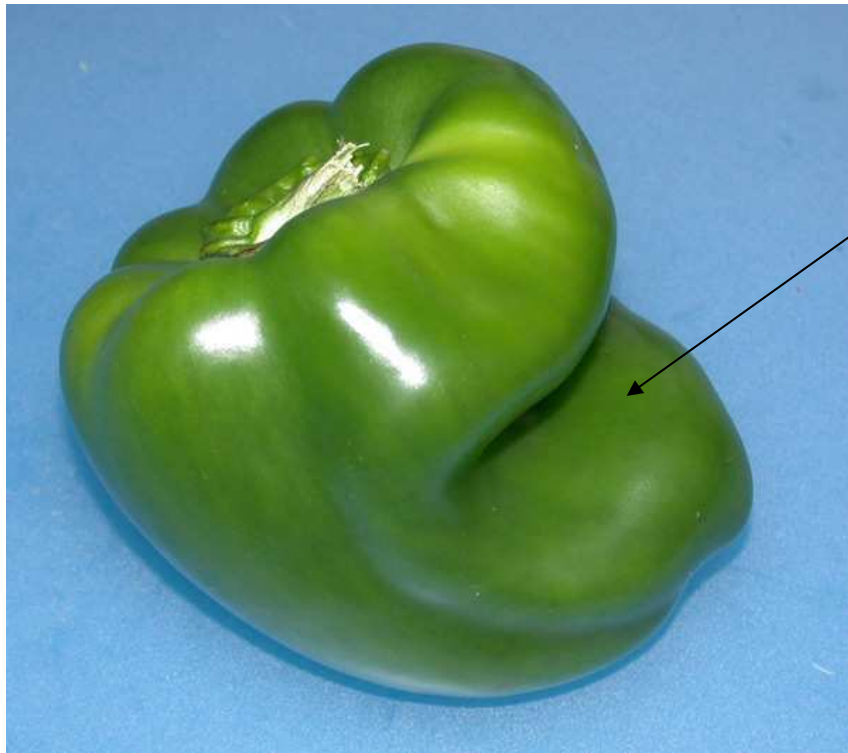
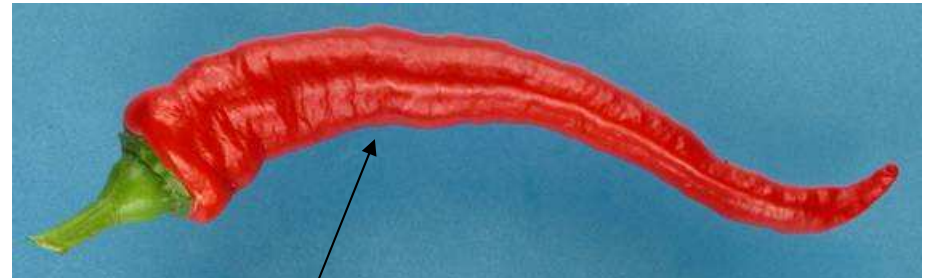


Photo 28



Limit allowed.

New photo

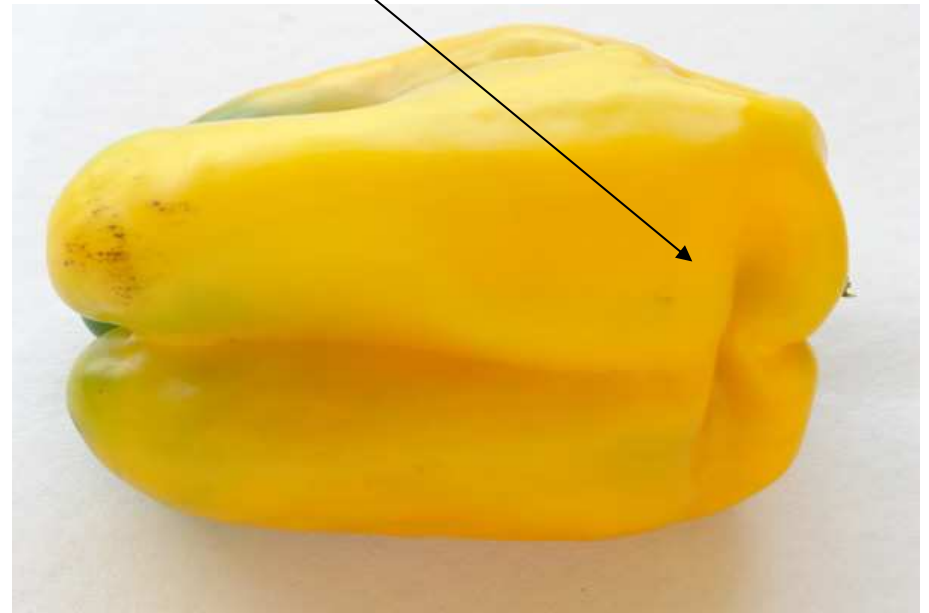
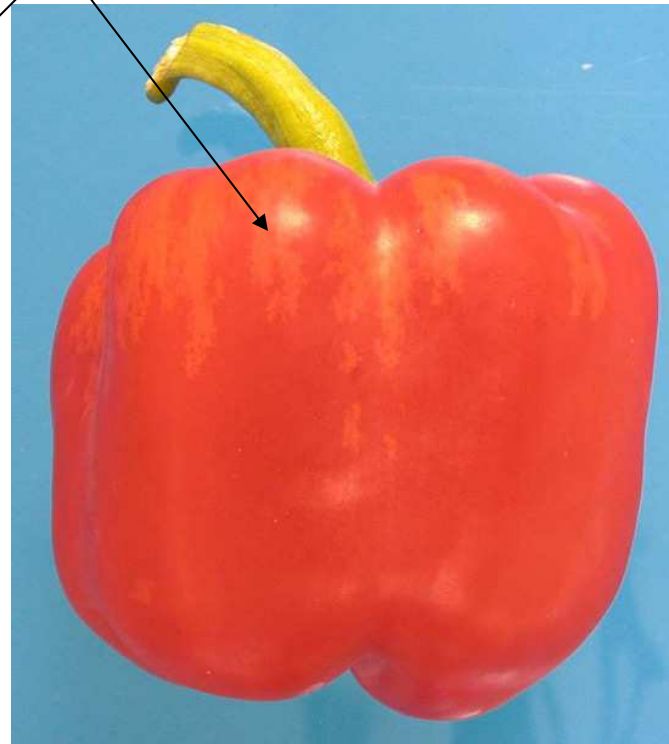
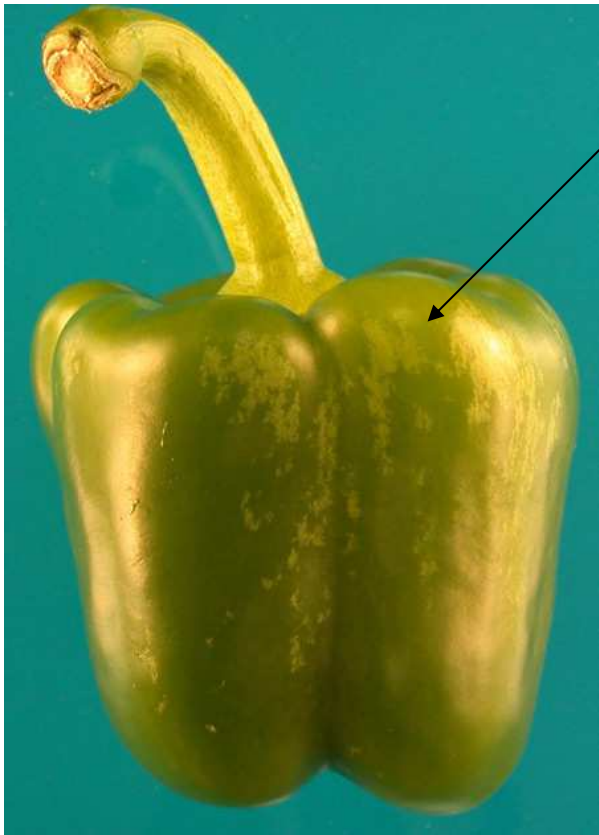


Photo 29

B. Classification - Class I

2. Slight silvering covering not more than 1/3 of the total surface area

A slight silvering or brown/black colouration covering up to one third of the surface is allowed. Silvering (photos 30, 31).



Changes in colouration as the fruit ripens is not considered a colour defect.

B. Classification - Class I

2. Slight silvering covering not more than 1/2 of the total surface area

A slight silvering or brown/black colouration covering up to one third of the surface is allowed.

Brown/black colouration (photos 32, 33).



Change in colouration as the fruit ripens is not considered a colour defect

B. Classification - Class I

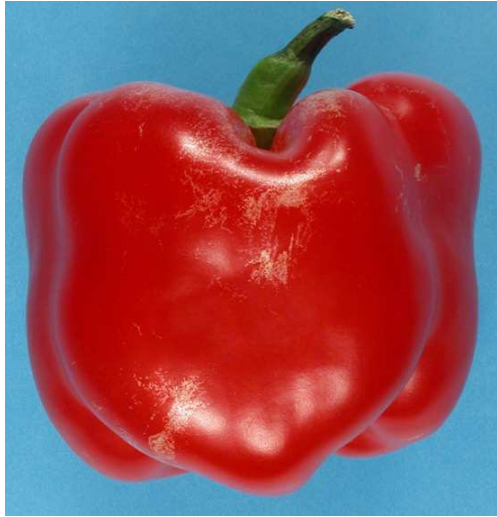


Photo 39

2. Slight silvering covering not more than 1/3 of the total surface area

Slight contrasting colour defects. Limit allowed in Class I.

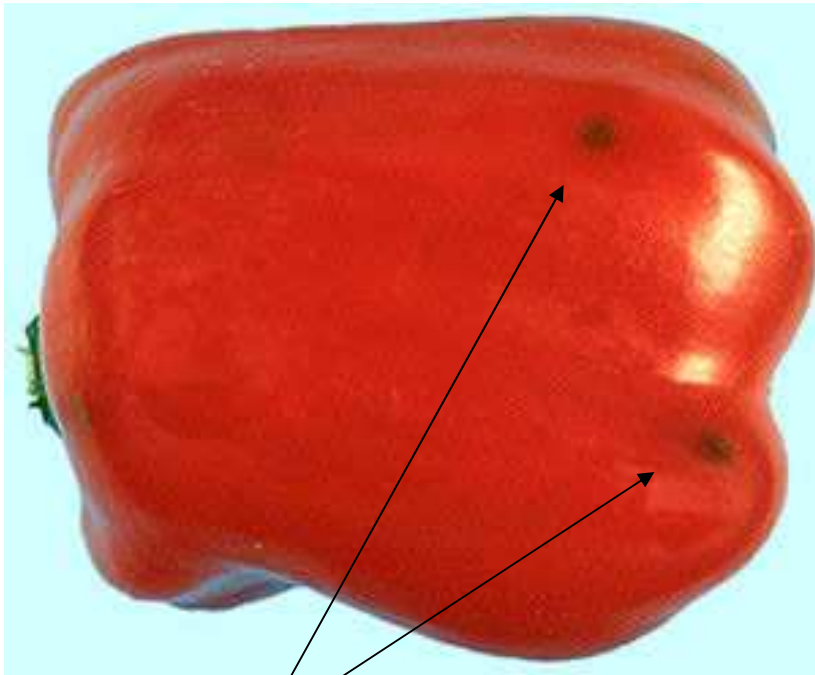


New photos



B. Classification - Class I

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



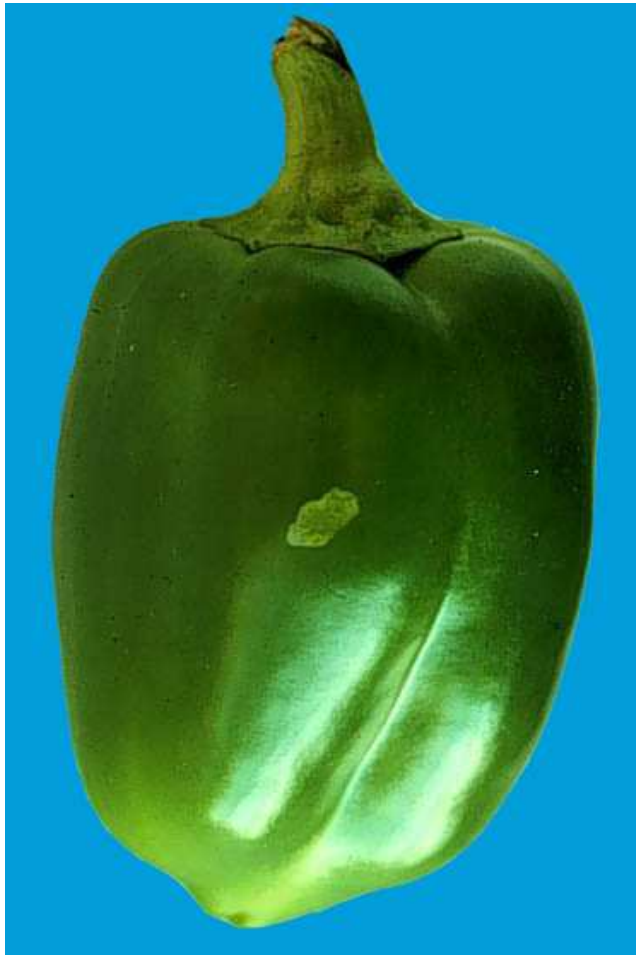
Limit allowed

Slight 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.

It is recommended that packers take account of the destination market when packing fruit with this defect. (photo 34).

B. Classification - Class I

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



Slight pressure marks. Limit allowed in Class I. The damage must not have penetrated into the centre of the pepper. (photos 37, plus new photo). It is recommended that packers take account of the destination market when packing fruit with this defect..

B. Classification - Class I

- 3. Slight skin defects: Including pitting, scratching, sunburn, pressure marks covering in total not more than 2 cm for defects of elongated shape, and 1 cm² for other defects**

Slight sunburn:

Limit allowed.

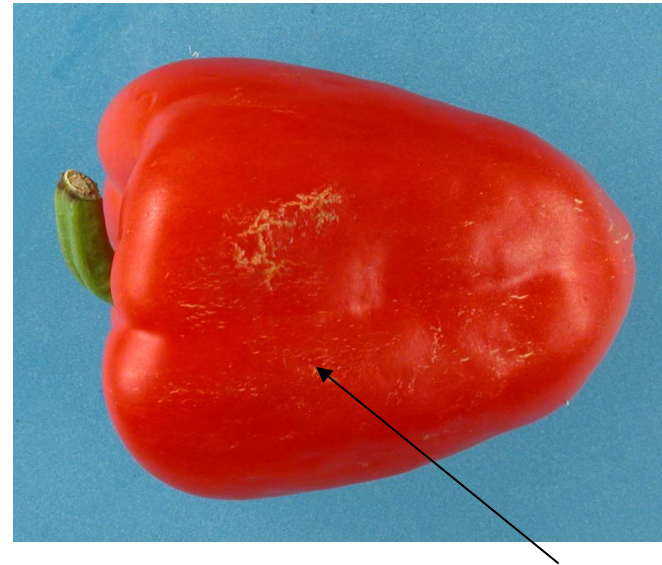
Photo required?

B. Classification - Class I



German photo 48

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

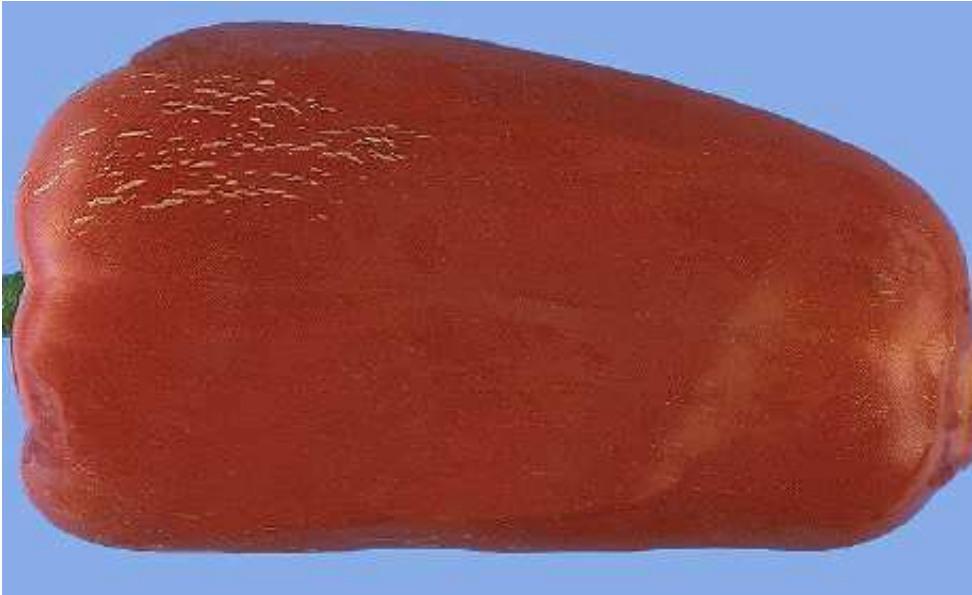


Slight surface scratching.

Limit allowed in Class I

(photo 47)

B. Classification - Class I



3. Slight skin defects: Dry superficial cracks covering in total not more than 1/8 of the total surface area

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

B. Classification - Class I

4. 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. (New photo).

B. Classification - 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 colouring covering not more than 1/2 of the total surface area
- skin defects:
 - including pitting, scratching, 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
 - Or: 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.
- blossom end deterioration not more than 1 cm².
- Not more than 1/3 of the surface may be affected by shrivelling.

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

B. Classification - Class II

1. Defects in shape.

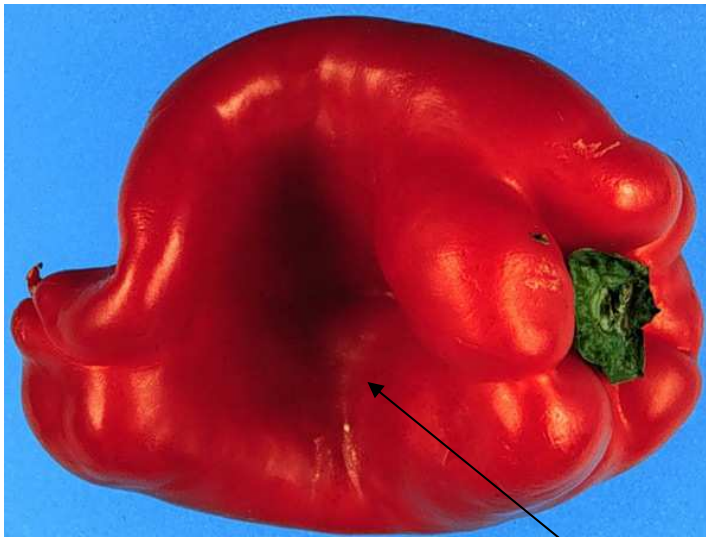


Photo 43

*Square type shape defects
acceptable in Class II*



New photo

*Defects of shape and development are allowed.
Defects affecting edibility are excluded.*

B. Classification - Class II

1. Defects in shape.

Square types with limit allowed shape defect not affecting edibility. Shape defects affecting edibility are not acceptable: (photo 19, plus German photo 46)



B. Classification - Class II

1. Defects in shape.



*Photo 45
enlarged*

New photo



Photo 44

*Tapered type -
shape and
development
defects acceptable
in Class II*

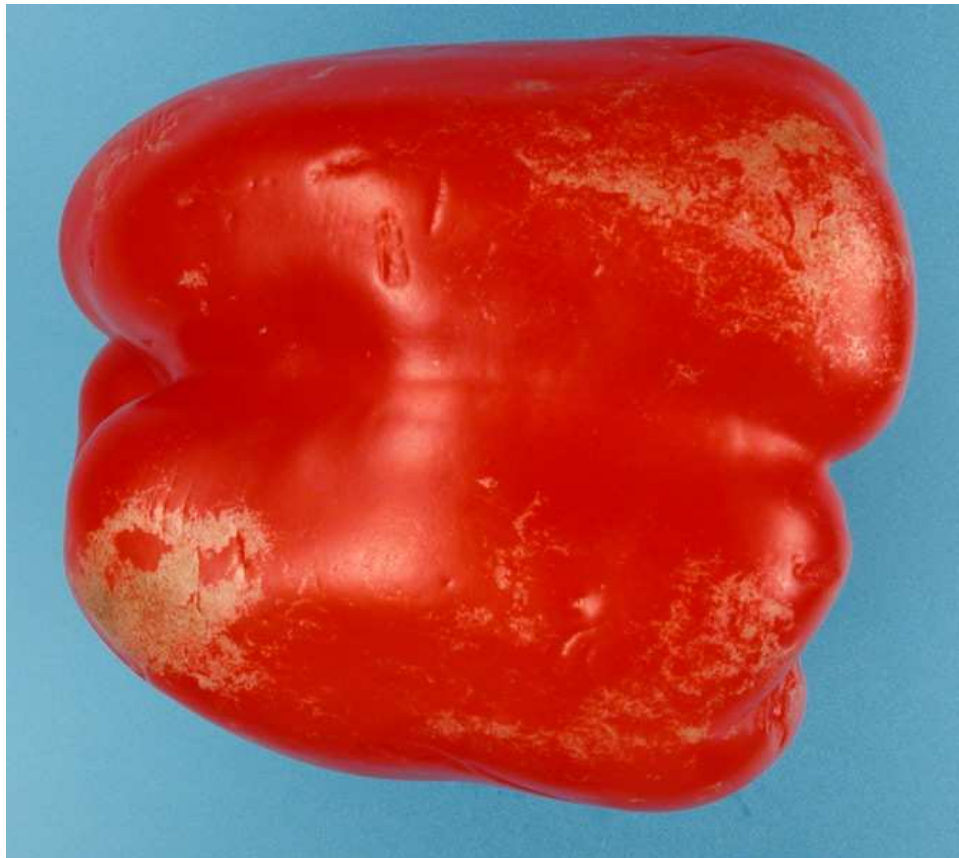
*Defects affecting
edibility are
excluded*



New photo Slide 48

B. Classification - Class II

2. Defects in colouring covering not more than 2/3 of the total surface area



Silvering

*Limit allowed in
Class II.*

New photo

B. Classification - Class II

3. Skin defects including pitting, scratching, sunburn, bruising, 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

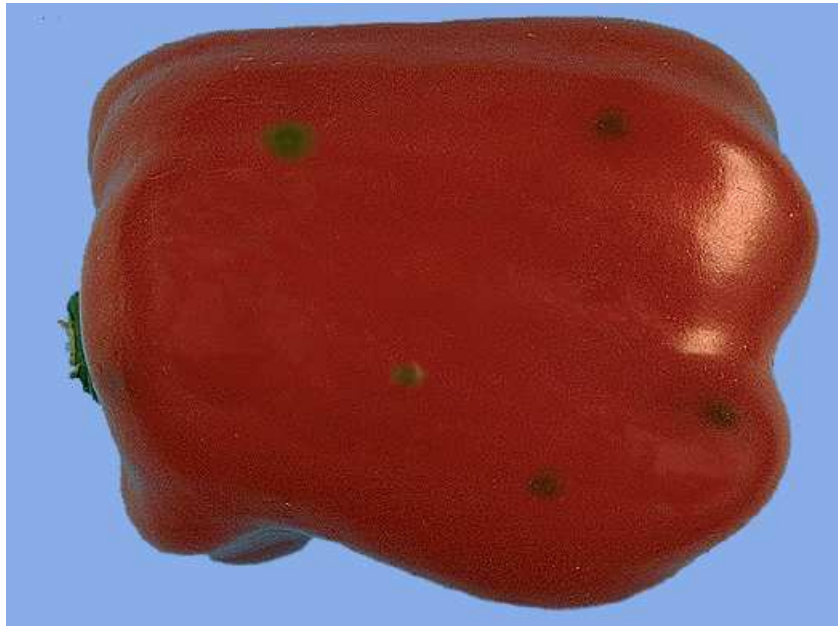


Photo 48

Slight scarring or scratching on body of sweet pepper. Provided the overall appearance is not affected (photos 20, 48).

B. Classification - Class II

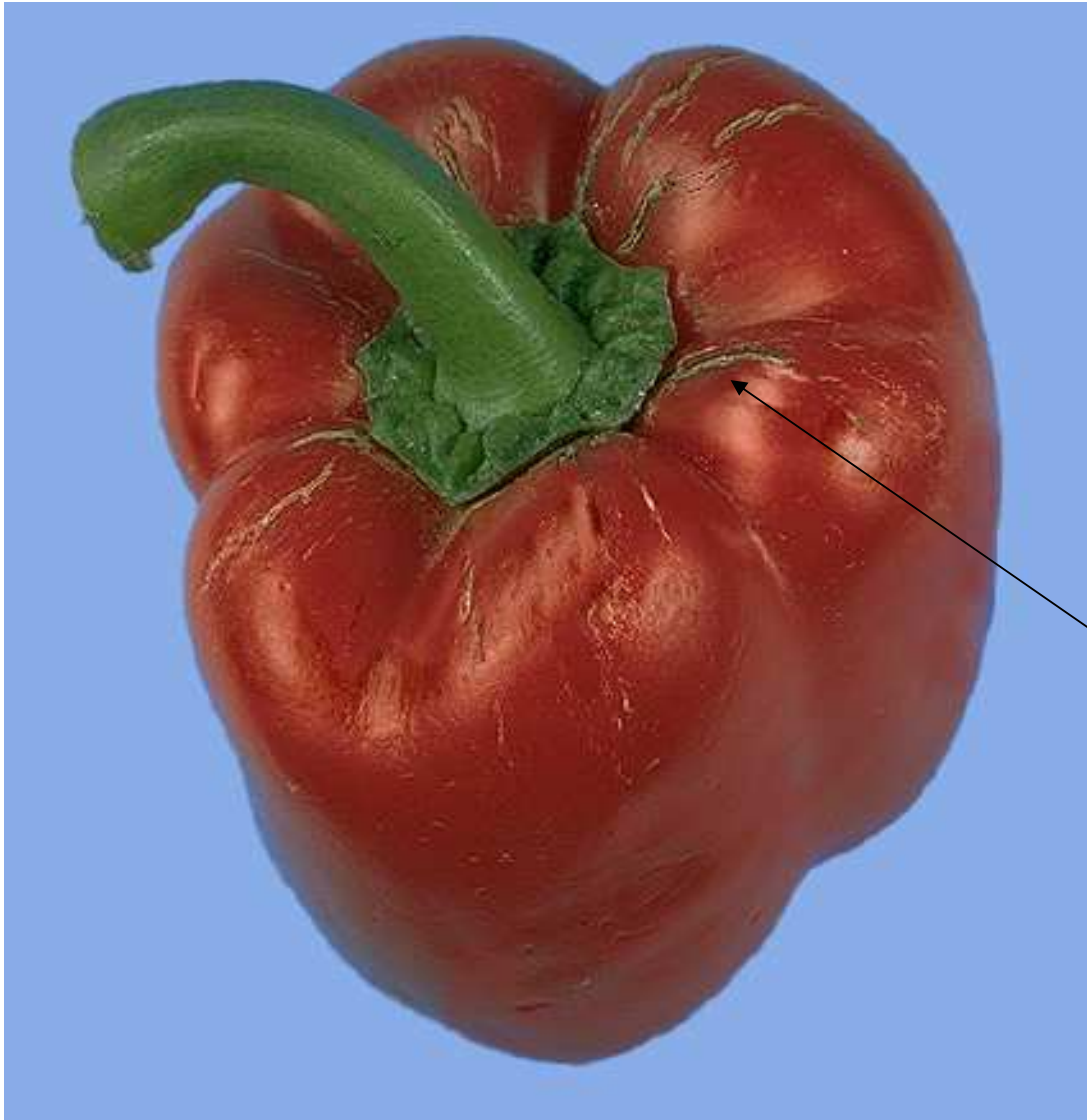
3. Skin defects including pitting, scratching, sunburn, bruising, healed injuries covering in total not more than 4 cm in length for defects of elongated shape, and 2.5 cm² of the total area for other defects



Pitting: Slight surface spotting, Limit of 5 slight spots is allowed in Class II. Spots must be sound and showing no form of deterioration on the inside (photo 50).

It is recommended that packers take account of the destination market when packing fruit with this defect.

B. Classification - Class II

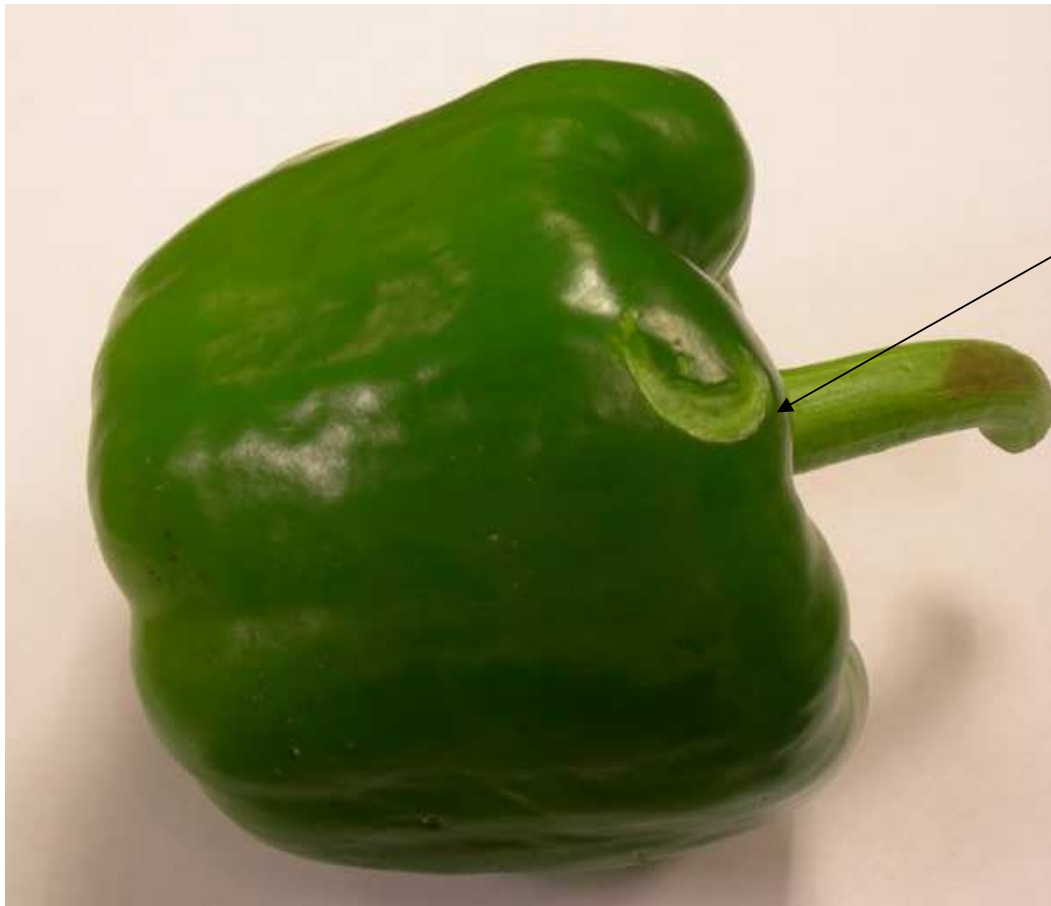


3. Skin defects including pitting, scratching, sunburn, bruising, healed injuries covering in total not more than 4 cm in length for defects of elongated shape, and 2.5 cm² of the total area for other defects

Slight cracking, scarring or scratching around neck of sweet pepper. Limit allowed. Provided the overall appearance is not affected. Any cracks should be shallow and not discoloured (photo 49).

B. Classification - Class II

3. Skin defects including pitting, scratching, sunburn, bruising, 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 bruising:
Limit allowed
(**new photo**).*

*It is recommended
that packers take
account of the
destination market
when packing fruit
with this defect.*

B. Classification - Class II

3. Skin defects including pitting, scratching, sunburn, bruising, 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 dry injuries: 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. Limit allowed (photos 53, 54).



It is recommended that packers take account of the destination market when packing fruit with this defect.

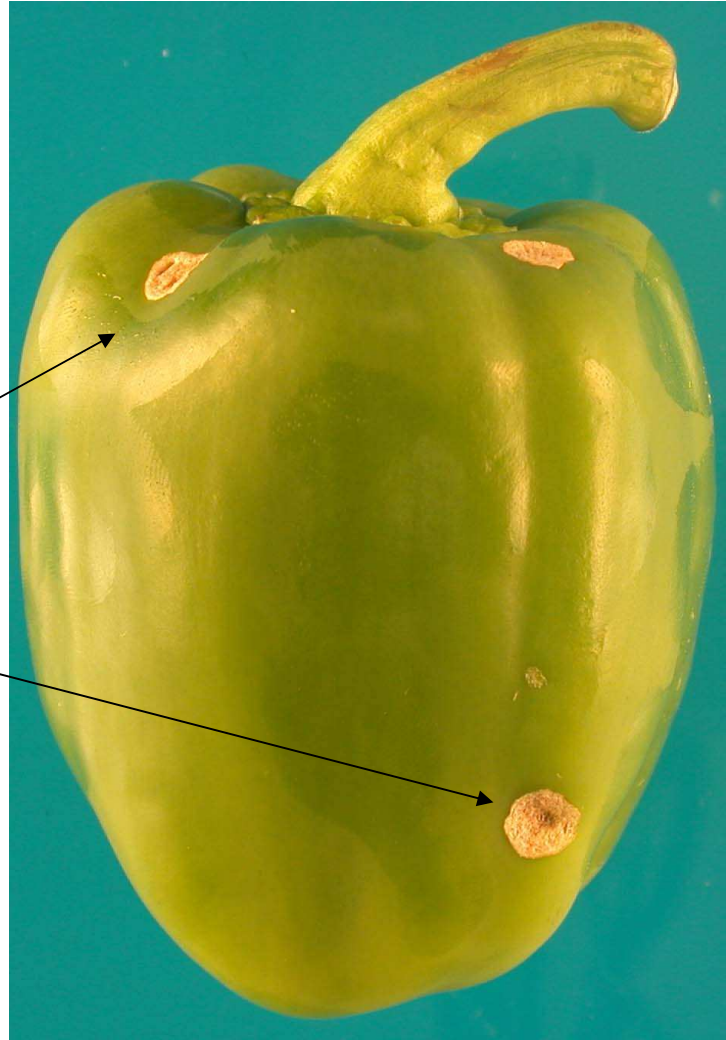
B. Classification - Class II

3. Skin defects including pitting, scratching, sunburn, bruising, 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 healed injuries:
Small areas of superficial
pest damage are allowed
as long as they are healed
and dry and will not cause
further deterioration.*

Limit allowed?

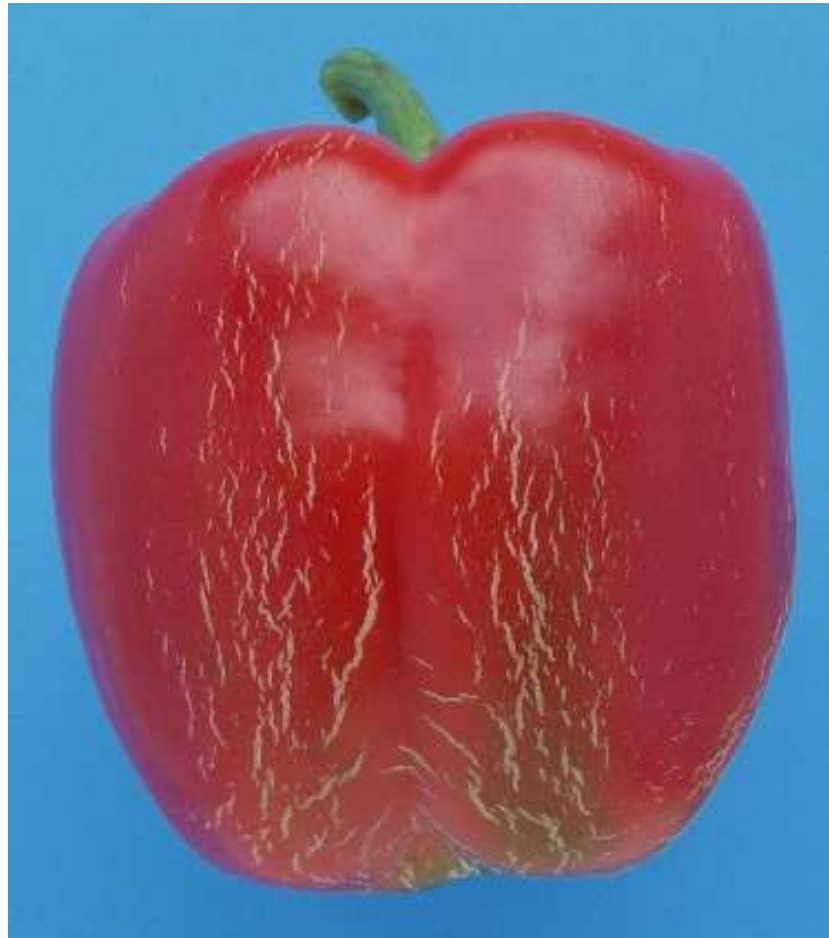
New photo



B. Classification - Class II

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

Fine cracking: Maximum limit allowed on one face of the sweet pepper (German photo 54).



B. Classification - Class II

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

Limit allowed in Class II (photo 46).



B. Classification - Class II

5. Blossom end deterioration not more than 1cm².

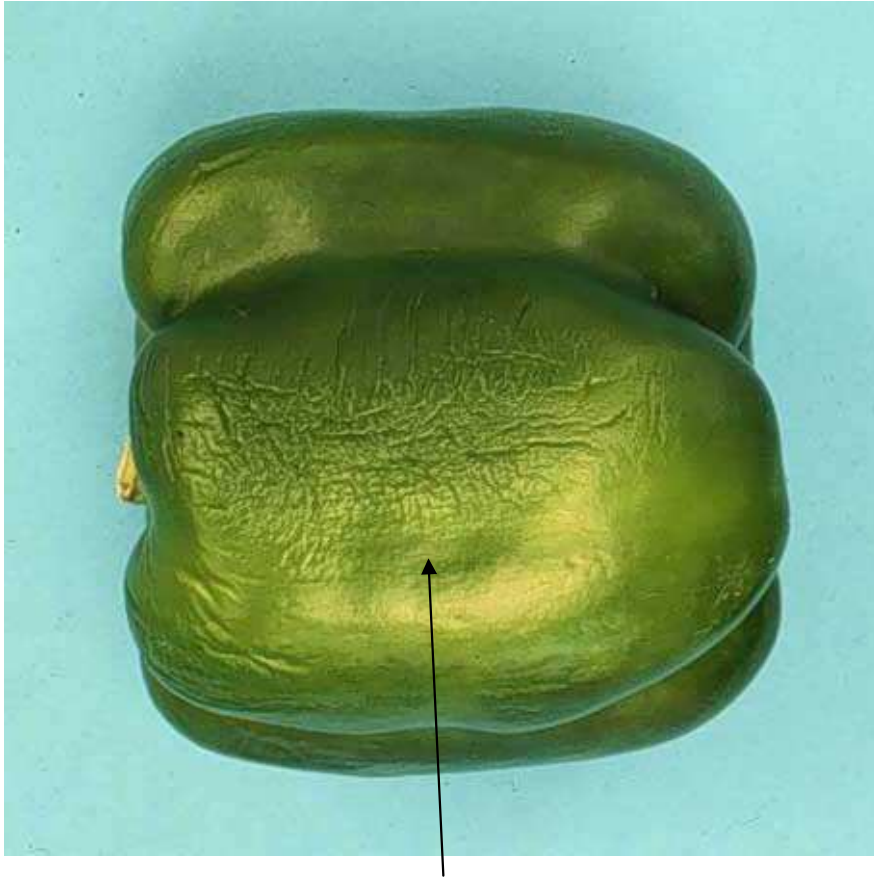


Slight blossom end deterioration.

Limit allowed (photo 52).

B. Classification - Class II

6. Not more than 1/3 of the surface may be affected by shrivelling.



Limit allowed (photo 56)

Slight shrivelling or lack of turgidity covering up to one third of the sweet pepper is allowed, as long as the sweet pepper remains reasonably firm.

It is recommended that packers take account of the destination market when packing fruit with this defect.

B. Classification - Class II

7. The peduncle and the calyx may be damaged, provided the flesh remains intact and protected (*Rots on the non-edible calyx are only allowed in the tolerance of Class II.*)

Limit allowed new photo



Damage acceptable in Class II.

*The peduncle may be damaged, cut or torn, but the base must remain. Parts of the calyx may be missing, due to pest or handling damage, but at least 50 per cent of the calyx must be **undamaged** (photos 58, 60 plus German 56).*



III. Provisions Concerning Sizing

- Size is determined by the maximum equatorial diameter or weight of the sweet peppers.
- To ensure uniformity in size, the difference in diameter between the largest and smallest sweet peppers in the same package shall be limited to: 20 mm.
- When packed by weight the difference between the largest and smallest in the same package shall be limited to 100 grams. (?)
- 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.

IV. Provisions Concerning Tolerances

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.

IV. Provisions Concerning Tolerances

A. Quality tolerances

(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.

IV. Provisions Concerning Tolerances

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, but excluding sweet peppers having a diameter of 10 mm greater or less than the size marked

V. Provisions Concerning Presentation

A. Uniformity

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 colour sales packs in wholesale package (photo 62).

V. Provisions Concerning Presentation

A. Uniformity

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.



Wholesale package containing fruit uniform in origin and quality

Slide 68

V. Provisions Concerning Presentation

A. Uniformity

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



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

V. Provisions Concerning Presentation

A. Uniformity

In the case of sized produce, elongated sweet peppers should be sufficiently uniform in length (*photo 64*).



V. Provisions Concerning Presentation

A. Uniformity

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

Careful presentation – Class I (photo 65)



V. Provisions Concerning Presentation

A. Uniformity

Suitable presentation – Class II (photo 66).



Any attempt to deceive by placing superior product on the top layer is not allowed

V. Provisions Concerning Presentation

A. Uniformity

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



V. Provisions Concerning Presentation

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.



Sales package (photo 68).

VI. Provisions Concerning Marking

Each package^[1] must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

- Identification
- Nature of produce
- Origin of produce
- Commercial specifications
- Official control mark (optional)

^[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”.

VI. Provisions Concerning Marking

- **A. Identification**

Packer	Name and physical address
and/or	(e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially
Dispatcher	recognized by the national authority ^[2] .

^[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.

VI. Provisions Concerning Marking

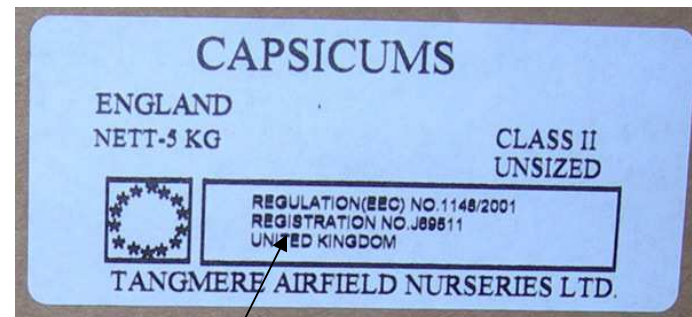
On each package, all particulars must be grouped on the same side of the package, either printed on it or attached by a label. Name and address or officially recognized code mark should be indicated (photos 69, 70, 71).



Packer/dispatcher address



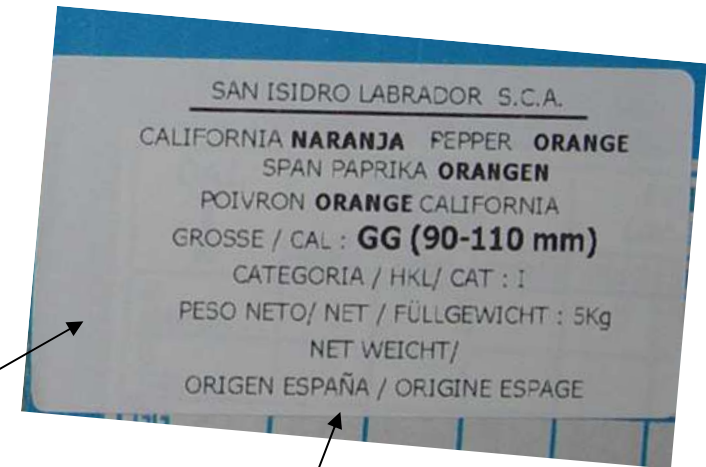
Local size code (optional)



Official code

VI. Provisions Concerning Marking

- 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 (New photos).



Class

Origin

Size

Packer/dispatcher address

Alternate to slide 79?

Slide 78

VI. Provisions Concerning Marking

Sales package containing fruit uniform in origin and quality.



VI. Provisions Concerning Marking

B. Nature of produce

- - If the contents are not visible from the outside:
- - “Sweet peppers”
- - Colour, or as the case may be, 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

VI. Provisions Concerning Marking

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)