

Bundesanstalt für
Landwirtschaft und Ernährung



UNECE Standard for Sweet Peppers FFV-28 (2009)
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DSC01529

Die BLE.
Für Landwirtschaft und Ernährung.

Photo: DSC01529

Pursuant to article 2 of Regulation (EU) No 1580/2007 as amended by Reg. (EU) No 1221/2008 the specific marketing standard for sweet peppers must be applied in the EU at all marketing stages (wholesale, retail, export, import). This EU standard is published in annex I part B part 8 of the regulation 1580/2007.

In previous years the EU standard for sweet peppers was fully harmonised with the UNECE standard. Actually this is not the case. The revision 2009 of the UNECE standard has not yet been implemented in the EU standard. This harmonisation is planned for the end of 2010.

For the time being, the EU standard does not have an Extra class, the defects allowed in Classes I and II are less specific and the minimum sizes are still valid.

The interpretation of the UNECE standard presented here follows the interpretation as outlined in the interpretative brochure published by the UNECE in 2009.

The UNECE standard and brochure can be downloaded:

www.unece.org/trade/agr/welcome.htm



World: 26.0 Mio. t

Statistics

Producing countries – TOP 10 – 2007 (FAO-Stat)		
China	14.0 Mio. t	54 %
Mexico	1.7 Mio. t	7 %
Indonesia	1.1 Mio. t	4 %
Turkey	1.1 Mio. t	4 %
Spain	1.1 Mio. t	4 %
USA	0.9 Mio. t	3 %
Nigeria	0.7 Mio. t	3 %
Egypt	0.5 Mio. t	2 %
Korea, Rep.	0.4 Mio. t	1 %
Netherlands	0.3 Mio. t	1 %

Statistics from FAO-Stat



Sweet peppers in Germany	2007 (StaBuA)	
	t	%
National production	2,100 t	
Imports – total	270,793	100
Imports EU countries (27)	223,104	82
Imports NON-EU	47,689	18
Netherlands	117,678	44
Spain	81,768	30
Israel	33,751	13
Hungary	12,533	5
Morocco	6,380	2
Turkey	6,172	2
Greece	4,288	2
Italy	3,268	1
Belgium	1,550	1
Per-capita consumption	3 kg	

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Statistics from the German Federal Office for Statistics

Germany is a net importer for sweet peppers. More than 80 % are imported from EU member states such as the Netherlands, Spain, Hungary, Greece, Italy and Belgium. In winter time, the market is supplied by Israel and Morocco.



Statistics

Inspection at Import (Non EU) to Germany Fruit and Vegetables (of which sweet peppers in brackets)					
year	application	waiver	conformity	rejection	
2007	124,845 t (1,078 t)	10,658 t (21 t)	109,148 t (1,044 t)	5,039 t (13 t)	4.4 % (1.2 %)
2008	138,446 t (3,119 t)	15,464 t (17 t)	119,836 t (3,102 t)	3,146 t (0 t)	2.5 % (0 %)
2009 (Jan-June)	83,522 t (599 t)	21,591 t (36 t)	59,829 t (563 t)	2,102 t (0 t)	3.4 % (0 %)

not clean, chilling injury, labelling

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Statistics from BLE import inspection

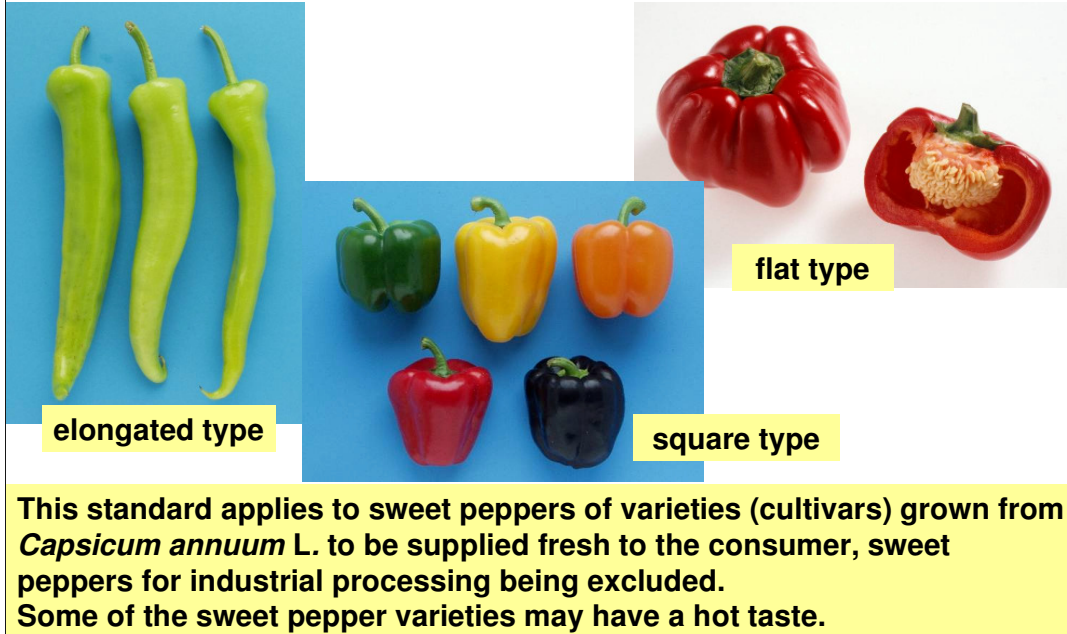
The import inspection is restricted to non-EU countries. Sweet peppers are imported to Germany in winter from Israel and Morocco, in summer from Turkey.

In general the quality is excellent, nearly not rejections because of substandard products. The products from Turkey are mainly labelled "Class II" although the quality is mostly class I.

The few rejections were related to not clean product, chilling injury (due to too low temperature during transport) and labelling (no labelling at all or size missing).

The importer has the right to do whatever possible to bring the lot into conformity. During the re-grading, re-packing and/or re-labelling process, the rejected lot remains under the supervision of the customs authority and the BLE inspection service. After a second inspection the conformity of the produce can be stated in many cases and thus the custom clearance is possible.

Definition of Produce



Photos: P3036331, PA038278, m001-024

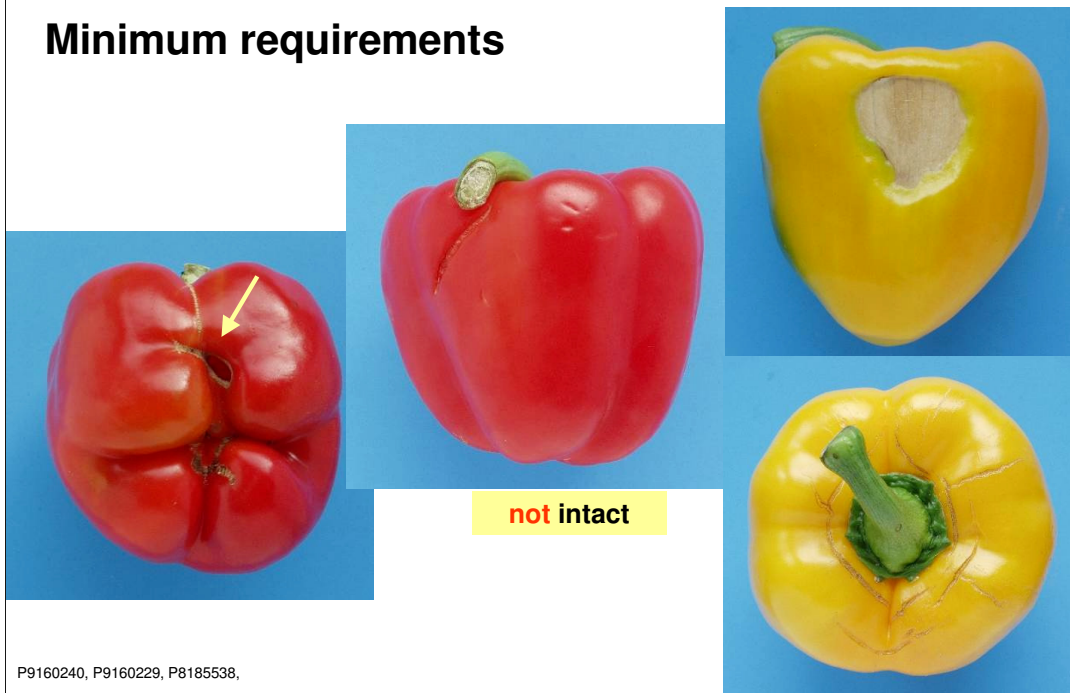
Definition of produce

Interpretation: The UNECE standard does not specify the different commercial types of sweet peppers. In general it is possible to differentiate the elongated, square and flat type.

Especially within the elongated and flat types it may happen that the produce has a slightly hot taste. Those lots used to be excluded from the standard before the 2009 revision. Now they are included and can be inspected.

Anyway, the standard does not include the fresh chilli peppers. For this product a new, separate UNECE standard is in preparation.

Minimum requirements



Photos: P9160240, P9160229, P8185538,

Minimum requirements: „intact“

Interpretation: The sweet peppers must not have any damage or injury. The skin must be intact. Unhealed injuries or holes exposing the interior of the produce are not allowed.

“Not intact” produce is allowed within the quality tolerance of the classes I (1 %) and II (10 %).



Minimum requirements



Photos: P2286228, P2286100,

Minimum requirements: „sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded“

Interpretation: The sweet peppers must be free of any disease or serious deterioration which appreciably affects their appearance, edibility and keeping quality. Sweet peppers showing rotting or mould, even if the signs are very slight or the rot affects the calyx and/or peduncle are excluded.

Some varieties are very susceptible to rots at the blossom end or distal end. Sometimes it is very difficult to detect the very early signs of rotting.

“Not sound” produce is allowed within the tolerance for decay as defined in the quality tolerances of the classes I (1 %) and II (2 %).



Minimum requirements



Photos: P2286108

Minimum requirements: „sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded“

Interpretation: The sweet peppers must be free of any disease or serious deterioration which appreciably affects their appearance, edibility and keeping quality. Sweet peppers showing serious pitting, serious blossom end deterioration or serious bruising are excluded.

“Not sound” produce is allowed within the tolerance for decay as defined in the the quality tolerances of the classes I (1 %) and II (2 %).

Minimum requirements



clean, practically free from any visible foreign matter
limit allowed for all classes

P2195694, PA268914

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Photos: P2195694, PA268914

Minimum requirements: „clean, practically free of any visible foreign matter“

Interpretation: The sweet peppers must be free of any visible soil, dust, chemical residue or other foreign matter. Extensive soiling or any traces of inorganic deposits are not allowed. Any deposits of a blue, green or other unusual colour indicating the presence of pesticide residues are not allowed.

The limit for “practically free of visible foreign matter” is shown in the photos. This limit is valid for all classes.



Minimum requirements



not clean or practically free from any visible foreign matter

PA268888, P3150923, P2195703

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Photos: PA268888, P3150923, P2195703

Minimum requirements: „clean, practically free of any visible foreign matter“

Interpretation: The sweet peppers must be free of any visible soil, dust, chemical residue or other foreign matter. Extensive soiling, any traces of inorganic deposits or sooty mould left from aphid infestation are not allowed. Any deposits of a blue, green or other unusual colour indicating the presence of pesticide residues are not allowed.

“Not clean” produce exceeding the “limit for practically free of visible foreign matter” is allowed within the quality tolerance of the classes I (1 %) and II (10 %).

Sweet peppers showing deposits of chemical residues are excluded.



Minimum requirements



not fresh in appearance and not firm

P2286139

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Photo: P2286139

Minimum requirements: „fresh in appearance“ and “firm”

Interpretation: The sweet peppers must be of any acceptable freshness. A freshly harvested sweet pepper or one from storage may be slightly soft but not shrivelled.

“Not fresh” or “not firm”, i.e. serious shrivelled produce is allowed within the quality tolerance of the classes I (1 %) and II (10 %).



Minimum requirements



not practically free from pests



not free from damage caused by pests affecting the flesh

P9025854

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Photos: P9025854

Minimum requirements: „practically free from pests“

Interpretation: The presence of pests can detract from the commercial presentation and acceptance of the sweet peppers. Therefore, the acceptable limit would be the odd insect, mite or other pest in the package or sample; any colonies would lead to the rejection of the produce.

“Not free from pests”, produce exceeding the “limit for practically free from pests” is allowed within the quality tolerance of the classes I (1 %) and II (10 %).

Minimum requirements: „free from damage caused by pests affecting the flesh“

Interpretation: The sweet peppers must be free from internal or external damage caused by pests. Pest damage affecting the flesh makes the produce unfit for consumption. However, slight damage caused by pests affecting the skin only are allowed within each class.

“Not free from damage caused by pests affecting the flesh” produce is allowed within the tolerance for decay as defined in the quality tolerances of the classes I (1 %) and II (2 %).



Minimum requirements



Photos: PA268932,

Minimum requirements: „free of damage caused by low temperatures or frost“

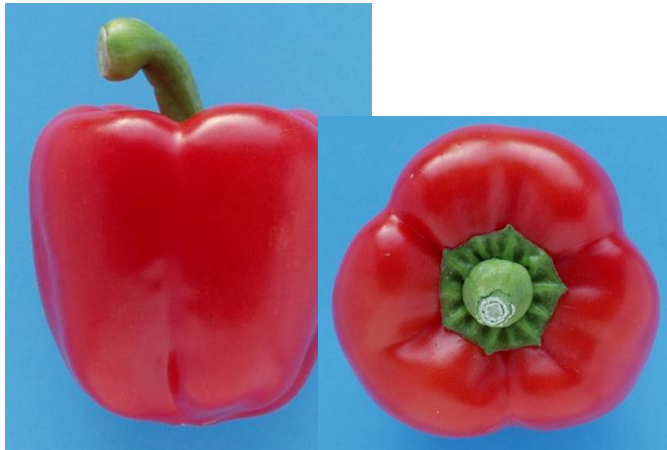
Interpretation: Damage caused by freezing (on the field or due to storage temperatures) is not allowed. Freezing damage is expressed once the produce is transferred to ambient temperatures as black seeds and decoloured, soft flesh.

“Not free from damaged caused by frost” produce is allowed within the tolerance for decay as defined in the the quality tolerances of the classes I (1 %) and II (2 %).

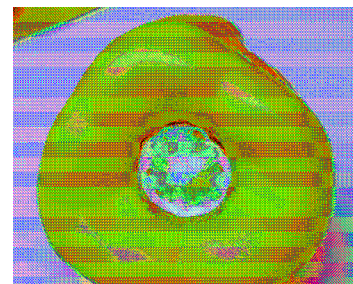
In addition, storage temperatures below the critical temperature of about 7 °C may cause chilling injury such as sunken glassy spots coalescing and deteriorating once the produce is transferred to ambient temperatures.

“Not free from damage caused by low temperatures”, i.e. slight chilling injury that does not affect the edibility is allowed within the quality tolerance of the classes I (1 %) and II (10 %).

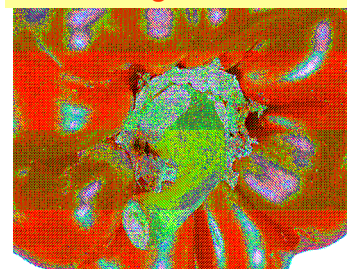
Minimum requirements



**with peduncles attached;
the peduncle must be neatly cut
and the calyx be intact**



**calyx
missing/not intact**



P9056008, P905594, UNECE-8, UNECE-34

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Photos: P9056008, P905594, UNECE-8, UNECE-34

Minimum requirements: „with peduncles attached; the peduncle must be neatly cut and the calyx be intact“

Interpretation: 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 greater part of the calyx must be present. The flesh must not be damaged.

“Peduncle missing” or “damaged calyx” produce is allowed within the quality tolerance of the classes I (1 %) and II (10 %).



Extra Class



characteristics of the variety and/or commercial type
very slight superficial defects allowed

P303650

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Photos: P303650

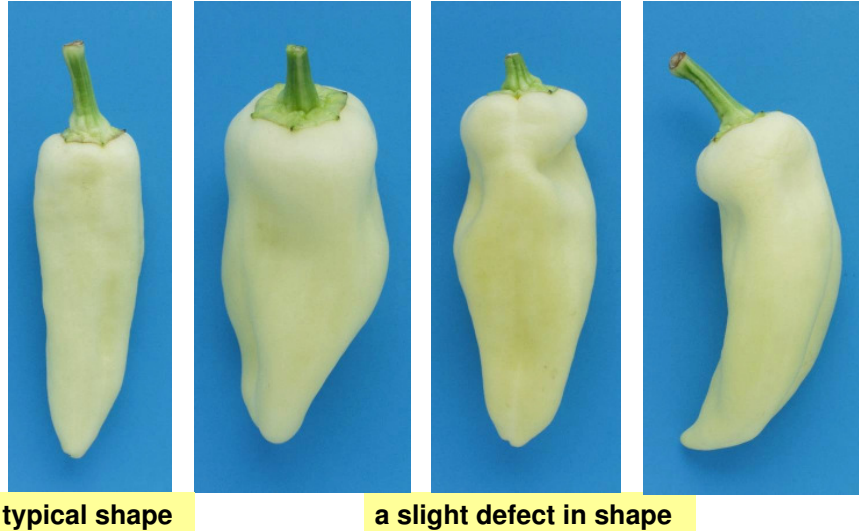
"Extra" Class: "Sweet peppers in this class must be of superior quality. They must be characteristic of the variety and/or commercial type. They must be free from defects, with the exemption of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package."

Interpretation: Superficial defects are allowed within the limits shown on the square type pepper on the photo. The shape must be characteristic of the commercial type.

Produce showing defects exceeding the limits specified are allowed within the quality tolerances only.



Class I



P8315786, -796, -791, -800

16

Photos: P8315786, -796, -791, -800

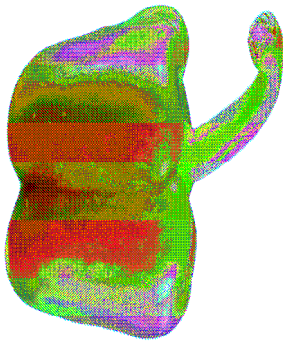
Class I: "Sweet peppers in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

The following slight defects, however, are 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."

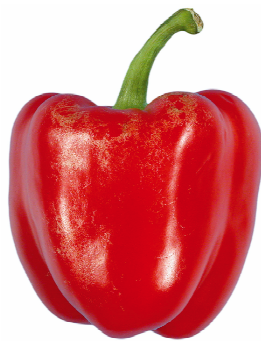
Interpretation: To evaluate a shape defect, the shape must be compared to the typical shape of the variety and/or commercial type concerned.

Produce showing defects in shape exceeding the limits specified are allowed within the 10 % quality tolerances only.

Class I



slight silvering or damage caused by thrips
covering not more than 1/3 of the total surface area



turning due to ripeness, no defect

Photos: P2215948, UNECE-40, UNECE-41

Class I: "Sweet peppers in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

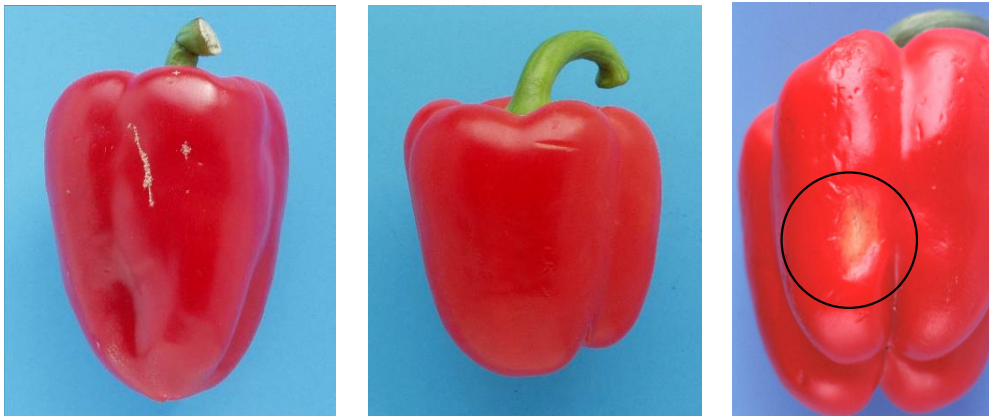
The following slight defects, however, are allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package: - slight silvering or damage caused by thrips covering not more than 1/3 of the total surface area."

Interpretation: Slight silvering and slight discoloration on up to 1/3 of the total surface are is allowed. This may be caused by lack of calcium during growth of the sweet peppers or by thrips or mites. However, changes in coloration as the products ripens are not considered a colour defect but are important for the uniformity requirements in Classes "Extra" and I.

Produce showing silvering exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class I



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

P2286176, PA188400,

18

Photos: P2286176, PA188400,

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, are allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package: - slight skin defects such as pitting, scratching, sunburn, pressure marks covering in total not more than 2cm for defects of elongated shape, and 1 cm² for other defects."

Interpretation: Slight scratching, sunburn and pressure marks not exceeding the limits specified – as shown on the photos – are allowed.

Produce showing slight skin defects exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class I



slight skin defects such as dry superficial cracks covering in total not more than 1/8 of the total surface area

Photos: PB260045

Class I: "Sweet peppers in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

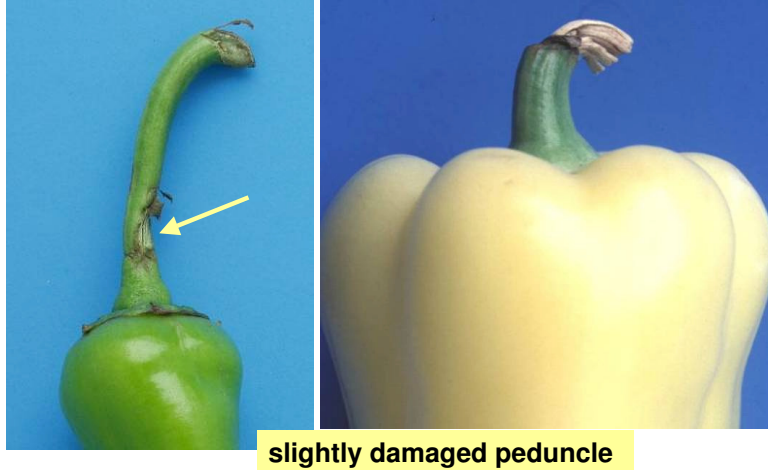
The following slight defects, however, are allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package: - slight skin defects such as dry superficial cracks covering in total not more than 1/8 of the total surface area."

Interpretation: Slight dry superficial cracks not exceeding the limits specified – as shown on the photos – are allowed.

Produce showing slight skin defects exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class I



P3120864

20

Photos: P3120864,

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, are allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package: - slightly damaged peduncle."

Interpretation: 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 slightly damaged or torn.

It is recommended that at the packing stage grading be restrictive for this defect, as a damaged peduncle or calyx is likely to be the entry for rotting and mould.

Produce showing damaged peduncle exceeding the limits allowed are allowed within the 10 % quality tolerances only.



Class II



P2286162, P6291337, UNECE-57

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Photos: P2286162, P6291337, UNECE-57

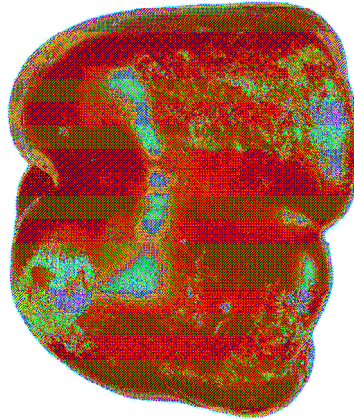
Class II: "This class includes sweet peppers that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above. The following defects may be allowed provided the sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - defects in shape."

Interpretation: Defects of shape and development are allowed. Sweet peppers with shape defects affecting edibility are excluded.

Misshapen produce is allowed within the 10 % quality tolerances only.

Misshapen produce showing corky tissue affecting the edibility is excluded – this means they are allowed within the 1 % tolerance for decay only.

Class II



**silvering or damage caused by thrips
covering not more than 2/3 of the total surface area**

Photos: P2215948, UNECE-40, UNECE-41

Class II: "This class includes sweet peppers 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 sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - silvering or damage caused by thrips covering not more than 2/3 of the total surface area."

Interpretation: Silvering and discolouration on up to 2/3 of the total surface are allowed. This may be caused by lack of calcium during growth of the sweet peppers or by thrips or mites. However, changes in coloration as the products ripens are not considered a colour defect but are important for the uniformity requirements in Classes "Extra" and I.

Produce showing silvering exceeding the limits specified are allowed within the 10 % quality tolerances only.

Class II



skin defects, such as pitting, scratching, sunburn, pressure marks covering in total not more than 4 cm for defects of elongated shape, and 2.5 cm² for other defects

P2286170, P9177142, UNECE-59

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Photos: P2286170, P9177142, UNECE-59

Class II: "This class includes sweet peppers 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 sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - skin defects such as pitting, scratching, sunburn, bruising, and 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."

Interpretation: Pitting, scratching, sunburn, pressure marks, healed injuries not exceeding the limits specified – as shown on the photos – are allowed.

Produce showing skin defects exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class II



skin defects such as dry superficial cracks
covering in total not more than 1/4 of the total surface area

PB260054

24

Photos: PB260054

Class II: "This class includes sweet peppers 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 sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - dry superficial cracks covering in total not more than $\frac{1}{4}$ of the total surface area."

Interpretation: Dry superficial cracks not exceeding the limits specified – as shown on the photo – are allowed.

Produce showing skin defects such as dry superficial cracks exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class II



blossom end deterioration not more than 1 cm²

Photos: UNECE-68

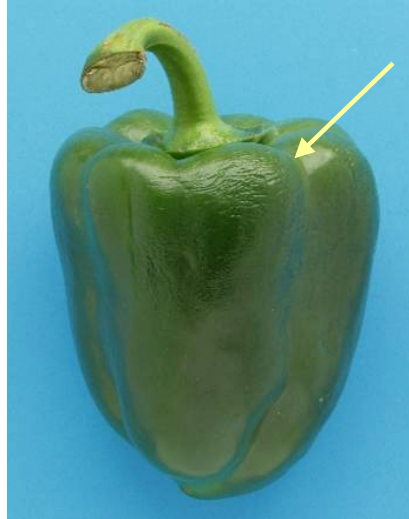
Class II: "This class includes sweet peppers that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above. The following defects may be allowed provided the sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - blossom end deterioration not more than 1 cm²."

Interpretation: Blossom end deterioration is allowed, provided the pale discoloured, leathery area at the distal end is dry and not exceeding the limits specified – as shown on the photo.

Produce showing blossom end deterioration exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class II



shrivelling not exceeding 1/3 of the surface

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Photos: UNECE-68

Class II: "This class includes sweet peppers 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 sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - shrivelling not exceeding 1/3 of the surface."

Interpretation: Slight shrivelling or lack of turgidity is allowed as long as the limits specified are not exceeded and the sweet pepper remains reasonably firm – as shown on the photo.

Advice: It is recommended that at the packing stage grading be restrictive for progressive defects such as shrivelling.

Produce showing shrivelling exceeding the limits specified are allowed within the 10 % quality tolerances only.



Class II



damaged peduncle and calyx, provided the surrounding flesh remains intact

P2215924, P2215934,

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Photos: P2215924, P2215934,

Class II: "This class includes sweet peppers 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 sweet peppers retain their essential characteristics as regards the quality, the keeping quality and presentation: - damaged peduncle and calyx, provided the surrounding flesh remains intact."

Interpretation: 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 the flesh and skin of the produce must not be damaged.

Produce showing damaged peduncle and/or calyx exceeding the limits specified are allowed within the 10 % quality tolerances only.

Decay on the non-edible peduncle or calyx is only allowed in the tolerances for decay, i.e. 1 % in Class I and 2 % in Class II.



Presentation



UNIFORMITY

origin
variety or commercial type
quality
size (if sized)

Extra and I:
degree of ripeness & colouring

m001-002m,

28

Photos: m001-002m,

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

Interpretation: For sweet peppers turning colour, uniformity may change during transportation. In Class II, mixing produce of different colouring and size is allowed.

Produce showing different colouring are allowed within the quality tolerances only – 5 % in "Extra" Class and 10 % in Class I.



Presentation



mixture of different colours,
same commercial type

However, a mixture of sweet peppers of distinctly different colours and/or commercial types may be packed together in a package and/or sales unit, provided they are uniform in quality and, for each colour and/or commercial type concerned, in origin.

Photos: DSC01488, P2195674

Presentation - Uniformity: "However, a mixture of sweet peppers of distinctly different colours and/or commercial types may be packed together in a package and/or sales unit, provided they are uniform in quality and, for each colour and/or commercial type concerned, in origin."

Interpretation: Uniformity in size in mixtures of distinctly different colours and/or commercial type is not required.



Marking



P3076532

30

Photos: P3076532

Marking (Labelling): "Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

- packer and/or dispatcher/shipper
- nature of produce if the contents are not visible from the outside
- "mixture of sweet peppers" or equivalent denomination where appropriate; if the produce is not visible from the outside, the colours or commercial types of the sales unit must be indicated
- country of origin; in case of mixtures of colours or commercial types of different origin, the origin must be indicated next to the name of the colour or commercial type concerned
- class
- size (if sized) expressed by minimum and maximum size (by diameter or by weight)
- number of units (optional)
- "hot" or equivalent denomination, where appropriate

Interpretation: The country mentioned in the context of the address of the packer and/or dispatcher is not regarded or accepted as country of origin. The origin must be indicated explicitly, e. g. "Country of origin: xx", "xx Produce", "Produce from xx".

The size code is optional.



Marking



P2195674, P3036343

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Marking (Labelling): "Each package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

- packer and/or dispatcher/shipper
- nature of produce if the contents are not visible from the outside
- "mixture of sweet peppers" or equivalent denomination where appropriate; if the produce is not visible from the outside, the colours or commercial types of the sales unit must be indicated
- country of origin; in case of mixtures of colours or commercial types of different origin, the origin must be indicated next to the name of the colour or commercial type concerned
- class
- size (if sized) expressed by minimum and maximum size (by diameter or by weight)
- number of units (optional)
- "hot" or equivalent denomination, where appropriate

Interpretation: The label is related to the mixed package on the left. The red and yellow sweet pepper are from Israel and the green one from the Netherlands.

70/90 is the size by diameter expressed in mm



Thank you for your attention!