

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

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Agenda Item 4(c)

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ORIGINAL LANGUAGE

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

*11<sup>th</sup> Session,  
Mexico City, Mexico, 8 - 12 September 2003*

**Proposed Draft Codex Standard for Apples**

**(At Step 3)**

Comments from the European Community

### EUROPEAN COMMUNITY

In general, the Community believes that explanatory remarks concerning interpretation of the standard and/or inspection methods should not be included to the standard but left to other international organisations, such as the OECD Scheme on fruit and vegetables standards.

#### **2.1., 6<sup>th</sup> indent**

The first paragraph of Appendix II should be included in the 2.1 either within the 6<sup>th</sup> indent or as a footnote: it would be much easier to read and would be consistent with the format of other Codex standards.

The explanation given in Appendix II is contradictory with the existence of the 6<sup>th</sup> indent: if damages caused by high or low temperatures are to be excluded only when there is internal browning, then this defect is already covered by the 2<sup>nd</sup> indent (deterioration such as to make it unfit for consumption): the 6<sup>th</sup> indent could be deleted in this case.

#### **2.1, 9<sup>th</sup> indent / Appendix II : watercore**

Watercore is a physiological disorder associated with high maturity fruit: translucent areas containing liquid near or in the fruit core appear and provoke within 2-3 months internal browning of the fruit during storage, especially CA storage. Fruit affected by this defect are not edible and this defect is already covered by the minimum requirement 'sound'.

Only when watercore is very slight, there are chances for certain varieties that it disappears under certain storage conditions (cooling slowed, CA slowly implemented), but then fruit get softer and their quality is also impaired.

Therefore, one should be very cautious in setting tolerances for watercore.

First, the tolerance (if any) should be for slight watercore only (e.g. contained within the vascular bundles), but never for watercore in "the area between the vascular bundles and the skin".

Second, for the Fuji variety and its mutants (which shows watercore as a varietal characteristics), it needs to be allowed. This variety is very firm (less risks of softening) and watercore disappears more easily for this variety than for others.

Third, for other varieties, the general rule should be that it is not allowed, except within Class II (see remarks about defects of the flesh below). If other varieties (they should be listed and discussed) than Fuji really need a tolerance, this one should be minimal (very slight watercore, contained within the vascular bundles and not coalesced).

Appendix II should be included in the 2.1, either in the ninth indent or as a footnote: it would be much easier to read and would be consistent with the format of other Codex standards.

### **2.1.1**

Maturity indicators should be integrated within this section: e.g. firmness, soluble solids, acidity, starch level and/or seed and fruit colour. Further work should be carried out on these indicators.

If a variety is grown in an area where it cannot develop and ripen properly, the fruits will not reach the taste typical for the variety. Therefore, in the first paragraph, the words 'and to the area in which they are grown' should be deleted.

### **2.2.1- Extra Class**

The stalk should be intact in Extra Class.

A fourth paragraph should be inserted reading "the flesh must be perfectly sound". This sentence is part of the UNECE standard and is very helpful in determining which degree of defects which can be allowed in Extra Class.

Appendix II should be included in the 2.2.1, 2.2.2 and 2.2.3: it would be much easier to read and would be consistent with the format of other Codex standards.

It is difficult to understand what is meant by limb rubs or similar blemishes and whether these defects should be located within the stem or calyx basin or could occur outside.

Concerning russetting, there should be a footnote explaining that russetting is not a defect for russeted varieties such as Canada, Cox, etc... These russeted varieties should be listed in appendix (see UNECE standard).

For other varieties, it is a good idea to list under 2.2 the criteria applicable. For Extra Class, the criteria proposed is acceptable concerning the stem basin (but it should not apply to the calyx) and looks similar to the one applied in the UNECE standard (despite a different wording). For clarity's sake, the UNECE wording should be adopted.

Extra Class should be for superior quality: therefore slight bruising of 1.5 cm<sup>2</sup> with light discolouration is far too much for Extra Class. This would be more than what is allowed in Class I of the UNECE standard. The paragraph mentioning this tolerance should be deleted.

Last subparagraph of 2.2.1 should then read :

"They must be free of defects, with the exception of the following very slight superficial defects, provided these do not effect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- very slight superficial skin defects not exceeding [0.5 cm<sup>2</sup>] of the total surface area [it is questionable whether an area should be determined for Extra Class. 0.5 cm<sup>2</sup> seems to be more than the limits accepted at the moment.]

- russetting<sup>1</sup> :

- brown patches not going beyond the stem cavity,

- slight and isolated traces of thin net-like russetting, not rough, not contrasting strongly with the general appearance of the fruit.

1- a list of varieties for which russetting is a characteristic of the skin and shall not be considered as a defect provided it corresponds to the typical appearance of the variety is given in appendix."

### **2.2.2. Class I:**

A second subparagraph should be inserted, reading "The flesh must be perfectly sound". This sentence is part of the UNECE standard and is very helpful in determining which degree of defects could be allowed in Class I.

The second sentence of the second subparagraph and the third subparagraph could be combined in a new third subparagraph, in order to be consistent with other Codex standards, and the provisions in Appendix II should be included in 2.2.2. for clarity's sake.

Concerning the slight defects allowed, several comments:

- blemishes, healed haled marks, scab etc... are proposed to be up to 2.5 cm<sup>2</sup> in total while they are topped-up at 1 cm<sup>2</sup> in the UNECE standards. This is too much for good quality fruit. We support the 1 cm<sup>2</sup> (included no more of 0.25cm<sup>2</sup> of scab). The UNECE layout seems also preferable, because it does not mention each kind of defect: for example, haled marks can affect the flesh which is not acceptable in Class I.
- stem or calyx cracks are affecting the flesh. They should therefore only be mentioned in Class II.
- russetting: see comments concerning Class Extra.

The four indents referring to russetting could read as follows:

"- russetting<sup>1</sup> :

- brown patches which may go slightly beyond the stem or pistil/calyx cavities,
- thin net-like russetting, not rough, not contrasting strongly with the general appearance of the fruit, on no more than 20% of the total surface of the fruit, including a maximum of 5% of total surface area of heavy russetting.

1- a list of varieties for which russetting is a characteristic of the skin and shall not be considered as a defect provided it corresponds to the typical appearance of the variety is given in appendix."

- slight bruising: 2 cm<sup>2</sup> seems a lot too much (twice more than the UNECE) and discolouration should not be allowed in Class I (only in Class II). The idea of taking a maximum % of the surface rather than a surface in mm is interesting but will be more difficult to check. Anyway, 2.26% is far too much (according to our calculations, 2.26% of the surface a spherical apple of 75 mm of diameter represents 4 cm<sup>2</sup> (not 2)).

### **2.2.3. Class II**

A second subparagraph should be inserted, reading "The flesh must be free from major defects". This sentence is part of the UNECE standard and is very helpful in determining which degree of defects could be allowed in Class II.

The second and the fourth subparagraph could be combined in a new second subparagraph, in order to be consistent with other Codex standards, and the provisions in appendix II should be included in 2.2.3. for clarity's sake.

The third subparagraph reading "The stalk may be missing, provided the break is clean and the adjacent skin is not damaged" should be deleted. In Class II, it should be possible to allow the break to be 'not clean' and damage to the adjacent skin could be allowed within the tolerance of Class II provided the damaged flesh is sound.

Concerning the defects allowed, several comments:

- blemishes, healed haled marks, scab etc... are proposed to be up to 3.5 cm<sup>2</sup> in total while they are topped-up at 2.5 cm<sup>2</sup> in the UNECE standards. This is too much for good quality fruit. We support the 2.5 cm<sup>2</sup> (included no more of 1 cm<sup>2</sup> of scab and possibly of other serious skin defects).
- russetting: see comments concerning Classes Extra and I.

The four indents referring to russetting could read as follows:

"- russetting<sup>1</sup> :

- brown patches, slightly rough, which may go beyond the stem or pistil/calyx cavities,
- thin net-like russetting, not rough, not contrasting strongly with the general appearance of the fruit, on no more than 50% of the total surface of the fruit, including a maximum of 33% of total surface area of heavy russetting.

1- a list of varieties for which russetting is a characteristic of the skin and shall not be considered as a defect provided it corresponds to the typical appearance of the variety is given in appendix."

- bruising: 2.5 cm<sup>2</sup> seems a lot too much (1.5 cm<sup>2</sup> the UNECE). The idea of taking a maximum % of the surface rather than a surface in mm is interesting but will be more difficult to check. Anyway, 3.54% is far too much (according to our calculations, 3.54% of the surface a spherical apple of 75 mm of diameter represents 6.3 cm<sup>2</sup> (not 2.5)).

### 3. Sizing

Minimum size in diameter: the European Community can accept the proposal with the exception of the minimum size for large-fruited varieties in Class II, which should be 60 mm instead of 57 mm.

A similar table for minimum weight shall be added, as follows:

	Extra Class	Class I	Class II
Large-fruited varieties	110 g	90 g	90 g
Small-fruited varieties	90 g	80 g	70 g

The paragraph and the table for Golden and Red Delicious should be deleted, because, once a table of minimum weight will be included, it will not be needed. There should be only minimum diameters or minimum weights, and once a fruit complied with one or the other of these two minima, it should be accepted.

Uniformity in size:

Rules of uniformity in size are too flexible to guarantee buyers a fair uniformity of size: we propose to stick to the UNECE's rules and wording: 5 and 10 mm respectively in diameter and 20 and 25% in weight respectively.

In footnotes 3 and 4, the limits should be set as 10 mm and 20 mm respectively.

There shall be no uniformity rule for Class II not in rows and layers.

### 4. Tolerances

Codex standards refer to the tolerances in each package, not each lot. This is logical with the fact that checks will be performed on some packages (representative of the lot), not on the whole lot. For consistency, only tolerances for each package shall be covered by this paragraph (the second sentence of the first subparagraph should be deleted).

The second subparagraph shall be deleted. In case decay or deterioration develop in storage or transit, the produce must be regraded.

4.1.1 and 4.1.2: the second sentence of both paragraphs should be deleted. All Codex standards do not include such sentence.

4.1.3. In the second subparagraph, 5% of fruit showing very severe defects looks too high. 2% is a maximum. An indent referring to very slight traces of rot should be added.

As russetting is mentioned in the criteria of Class II, the following sentence referring to tolerance for russetting should be added as 3<sup>rd</sup> subparagraph of section 4.1.3 ("Russetting (brown patches, thin net-like russetting, heavy russetting) is allowed for fruit not seriously detracting from the appearance and the condition of the package.").

#### 4.2. Size tolerances:

The third indent should refer to the package, not to the lot. Apples packed in a package designated by the numerical count would be covered by the first indent (or the second one if in Class II not in rows and layers). The third subparagraph should then be deleted. In Codex standards, there are no tolerances of number of packages per lot. The check is carried out on a sample (some packages) and percentages of tolerances are calculated on all the produce coming from this sample.

#### 5.1. Uniformity

In wholesale packages, trade is not mixing varieties. This occurs in packages intended for the final consumer only. Size of these packages is limited to 4-5 kilos. It is suggested to delete the second sentence of the first subparagraph of 5.1 and to amend the last subparagraph as follows:

"Uniformity of variety and origin are not required for apples in consumer packages of a net weight not exceeding 5 kilos".

## **5.2. Packaging**

During the last years, it has turned out that consumer packages of a net weight more than 3 kg need special packaging material to protect properly the produce. Therefore it is recommended that a second sentence reading "In particular, consumer packages of a net weight exceeding 3 kg shall be sufficiently rigid to ensure proper protection of the produce " is added to the first paragraph.

## **5.3. Presentation**

Extra Class apples should be only in rows and layers as a careful presentation.

"Apples may be presented in one of the following forms:

- in regular layers,
- loose in the package, including bulk bins

For Extra Class fruit must be packed in layers."

## **6.2. Non retail containers**

Apples transported in bulk are transported in bulk bins, which can be labelled. Therefore, the second sentence of 6.2 can be deleted.

### **6.2.4.**

- the indication of the size shall be better explained : minimum-maximum diameter or minimum-maximum weight, or for fruit not sized (Class II not in layers), diameter or weight of the smallest fruit followed by the expression "and +" or equivalent expression.
- the indication of the number of pieces shall be possible as an alternative to the indication of the size only for fruit packed in layers. Labelling the number of fruit in case of fruit in bulk is a non-sense, and for fruit loose in the package, there are too many uncertainties as to the real number of fruit to accept this method.