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ENTERPRISE DEVELOPMENT

Working Party on Standardization of
Perishable Produce and Quality Development

Specialized Section on Coordination of
Standardization of Fresh Fruit and Vegetables
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REPORT OF THE FORTY-SIXTH SESSION

Addendum 1

Note by the secretariat

This document contains the UN/ECE Recommendation for Apples and Pears (FFV-01) as revised by the Specialized Section. Additions are underlined and deletions crossed out. The Specialized Section recommends to the Working Party to adopt this text as a revised UN/ECE standard.

FFV-01: Apples and Pears

UN/ECE STANDARD FFV-01
concerning the marketing and commercial
quality control of

APPLES AND PEARS
moving in international trade between and to
UN/ECE member countries

I. DEFINITION OF PRODUCE

This standard applies to apples and pears of varieties (cultivars) grown from *Malus domestica Borkh.* and *Pyrus communis L.* to be supplied fresh to the consumer, apples and pears for industrial processing being excluded.

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements of apples and pears at the export control stage, after preparation and packaging.

A. Minimum requirements

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

- intact
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- clean, practically free of any visible foreign matter
- practically free from pests
- practically free from damage caused by pests
- free of abnormal external moisture
- free of any foreign smell and/or taste.

In addition, they must have been carefully picked.

The development and condition of the apples and pears must be such as to enable them:

- to continue their maturing process and to reach the degree of maturity required in relation to the varietal characteristics¹
- to withstand transport and handling, and
- to arrive in satisfactory condition at the place of destination.

¹ Due to varietal characteristics of the Fuji variety concerning maturity at harvest, radial watercore is permitted providing it is contained within the vascular bundles of each fruit.

B. Classification

Apples and pears are classified in three classes defined below:

(i) "Extra" Class

Apples and pears in this class must be of superior quality. In shape, size and colouring they must be characteristic of the variety² and the stalk must be intact.

The flesh must be perfectly sound.

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

Pears must not be gritty.

(ii) Class I

Apples and pears in this class must be of good quality. In shape, size and colouring they must be characteristic of the variety.²

The flesh must be perfectly sound.

The following slight defects, however, may be allowed, on individual fruit 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
- a slight defect in colouring
- slight skin defects which must not extend over more than:
 - 2 cm in length for defects of elongated shape
 - 1 cm² of total surface area for other defects, with the exception of scab (*Venturia inaequalis*), which must not extend over more than 0.25 cm² cumulative in area..
 - slight bruising not exceeding 1 cm² in area and not discoloured.

For apples the stalk may be missing, provided the break is clean and the adjacent skin is not damaged. For pears the stalk may be slightly damaged.

Pears must not be gritty.

² *The criteria for colouring and russetting are given in the Annex of this standard.*

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(iii) Class II

This class includes apples and pears which do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above.²

The flesh must be free from major defects.

The following defects are allowed provided the fruit retains its essential characteristics as regards the quality, the keeping quality and presentation.

- defects in shape
- defects in development
- defects in colouring
- skin defects which must not extend over more than:
 - 4 cm in length for defects of elongated shape
 - 2.5 cm² total surface area for other defects, including slightly discoloured bruising, with the exception of scab (*Venturia inaequalis*), which must not extend over more than 1 cm² cumulative in area.

III. PROVISIONS CONCERNING SIZING

Size is determined by maximum diameter of the equatorial section or by weight. However, when sizing by weight, the minimum weight must ensure all fruit, as appropriate, meet the minimum diameter sizes listed below.:

A minimum size by diameter is required for all classes as follows:

	Extra	Class I	Class II
Apples ^{3 4}			
Large fruited varieties ⁵	65 mm	60 mm	60 mm
Other varieties	60 mm	55 mm	50 mm

² *The criteria for colouring and russeting are given in the Annex of this standard.*

³ *The European Community has adopted larger minimum sizes for apples as follows:
Large fruit varieties: 70 mm for "Extra" Class; 65 mm for Classes I and II.
Other varieties: 60 mm for Class "Extra"; 55 for Class I and II.*

⁴ *Poland, Australia and New Zealand have placed reservations against changing the present minimum sizes.*

⁵ *The non-exhaustive list of large fruited varieties is given in the Annex of this standard.*

Pears

Large fruited varieties ⁵	60 mm	55 mm	55 mm
Other varieties	55 mm	50 mm	45 mm

Exceptionally, and for summer pears included in the Annex of this standard, no minimum size will be laid down for consignments dispatched between 10 June and 31 July (inclusive) of any year.

To ensure there is uniformity of size within a package, the difference in diameter between fruit in the same package shall be limited to:⁶

- 5 mm for "Extra" Class fruit and for Class I and II fruit packed in rows and layers⁷
- 10 mm for Class I fruit packaged in bulk in the package or in pre-packages.⁸

There is no sizing uniformity limit for Class II fruit packed in bulk in the package or in pre-packages.

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**
5 per cent by number or weight of apples or pears not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.
- (ii) **Class I**
10 per cent by number or weight of apples or pears not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class. However, pears without stalks are not included in this tolerance.
- (iii) **Class II**
10 per cent by number ~~of~~ or weight of apples or pears satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

⁶ *Reservation from Chile concerning the Fuji variety.*

⁷ *However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger, the difference in diameter may amount to 10 mm.*

⁸ *However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger the difference in diameter may amount to 20 mm.*

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Within this tolerance, a maximum of 2 per cent by number or weight of fruit is allowed which shows the following defects:

- serious attacks of cork (bitter pit) or water-core
- slight damage or unhealed cracks
- very slight traces of rot
- presence of internal feeding pests and/or damage to the flesh caused by pests.

B. Size tolerances

For all classes:

- (a) for fruit which is subject to the rules of uniformity, 10 per cent by number or weight of fruit corresponding to the size immediately above or below that marked on the package, with, for fruit classified in the smallest grade allowed a maximum variation of 5 mm below the minimum;
- (b) for fruit which is not subject to the rules of uniformity, 10 per cent by number or weight of fruit below the minimum size laid down, with a maximum variation of 5 mm below the minimum size.

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only apples or pears of the same origin, variety, quality, and size (if sized) and the same degree of ripeness.

In the case of the "Extra" Class, uniformity also applies to colouring.

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

Uniformity of variety is not required for ~~"Extra" Class and Class I~~ apples in prepacked units of a net weight not exceeding 2 kg. If different varieties of apples are sold in the same package, uniformity of origin is not required.

B. Packaging

The apples and pears must be packed in such a way as to protect the produce properly.

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

Packages must be free of all foreign matter.

C. Presentation

For "Extra" Class fruit must be packed in layers.

VI. PROVISIONS CONCERNING MARKING

Each package⁹ 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 address or
and/or)	officially issued or
Dispatcher)	accepted code mark. ¹⁰

B. Nature of produce

- "Apples" or "pears", if the contents are not visible from the outside
- Name of the variety or varieties (where appropriate)

C. Origin of produce

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

D. Commercial specifications

- Class
- Size, or for fruit packed in rows and layers, number of units.

If identification is by the size, this should be expressed:

- (a) for produce subject to the uniformity rules, as minimum and maximum diameters;
- (b) for produce not subject to the uniformity rules, the diameter of the smallest fruit in the package.

⁹ *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.*

¹⁰ *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.*

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E. Official control mark (optional)

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The UN/ECE Standard for Apples and Pears
has led to an explanatory brochure published by the OECD Scheme