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Working Party on Agricultural Quality Standards

Specialized Section on Standardization of
Fresh Fruit and Vegetables

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REPORT OF THE FIFTY-FIRST SESSION

Addendum 2

Draft Revised UNECE Standard for Apples

Note by the secretariat: This document is based on document TRADE/WP.7/GE.1/2003/26/Add.1.

Part I contains the draft revised UNECE Standard for Apples as agreed by the Specialized Section at its 51st session and recommended to the Working Party for adoption as a revised UNECE Standard.

The annex is not reproduced in this document as it is unchanged.

Part II contains changes, which are proposed to the Working Party for adoption for a two-year trial period.

At the last session a number of varieties were accepted into the standard provisionally. Since then no new information has been received from the applying countries (Turkey and Lithuania). As there were still a number of questions concerning these varieties (e.g. Rubin, Forele) the Specialized Section asked the secretariat to write to the countries concerned asking them to fill in the template for updating the list of varieties for apples (see TRADE/WP.7/GE.1/2004/25/Add.9) for each variety concerned.

The deadline for submitting this information was set at 1 October 2005 so that answers could be reviewed before the Working Party session. The Chairman of GE.1 will recommend at the Working Party how to proceed with these varieties.

Alro	B
Antej	B/L
Amasya	B
Beacon	A/L
Belorusskoje Maļinovoje	B
Bogatir	L
Doč Melbi	C/L
Forele	B
Iedzēnu	B/L
Ilga	B/L
Iron	C/R/L
Koit	C
Koričnoje Novoje	C/L
Kovalenkovskoje	B
Krameri Tuvioun	B
Kukikovskoje	B
Meelis	B/L
Melba	C
Noris	B
Orļik	B
Prima	B/L
Rubin (Kazakhstan cultivar)	B/L
Rudens Svītrainais	C/L
Saltanat	B
Sidrunkollane Talioun	L
Sügisdessert	C/L
Talvenauding	B/R
Tellisaare	B
Tiina	C/L
Veteran	B
Zaiļijskoje	B
Žigulovskoje	C/L

PART I: UNECE Standard for Apples

UNECE STANDARD FFV-50

concerning the marketing and commercial
quality control of

APPLES

I. DEFINITION OF PRODUCE

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

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements of apples 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 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 must be such as to enable them:

- ~~to continue their ripening process and to reach the degree of ripeness 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 and its mutants concerning maturity at harvest, radial watercore is permitted providing it is contained within the vascular bundles of each fruit.

B. Minimum maturity requirements

The apples must be sufficiently developed and display satisfactory ripeness.

The development and state of maturity of the apples must be such as to enable them to continue their ripening process and to reach the degree of ripeness required in relation to the varietal characteristics²

In order to verify the minimum maturity requirements, several parameters can be considered (e.g.: morphological aspect, taste, firmness and refractometric index).

BC. Classification

Apples are classified in three classes defined below:

(i) "Extra" Class

Apples 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 provided these do not affect the general appearance of the fruit, the quality, the keeping quality and presentation in the package.

(ii) Class I

Apples in this class must be of good quality. In shape, size and colouring they must be characteristic of the variety.³

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

²Due to varietal characteristics of the Fuji variety and its mutants concerning maturity at harvest, radial watercore is permitted providing it is contained within the vascular bundles of each fruit.

³The criteria for colouring and russetting as well as a non-exhaustive list of varieties are set out in the Annex of this standard.

- slight bruising not exceeding 1 cm² in area and not discoloured.

The stalk may be missing, provided the break is clean and the adjacent skin is not damaged.

(iii) Class II

This class includes apples 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, with the exception of scab (*Venturia inaequalis*), which must not extend over more than 1 cm² cumulative in area
 - slight bruising not exceeding 1.5 cm² in area which may be slightly discoloured.

III. PROVISIONS CONCERNING SIZING

Size is determined by maximum diameter of the equatorial section or by weight.

When size is determined by diameter the A minimum diameter size⁴ required⁵ for each class is as follows:

	Extra	Class I	Class II
Large fruited varieties ²	65 mm	60 mm	60 mm
Other varieties	60 mm	55 mm	50 mm

⁴ The European Community and Slovakia have adopted larger minimum sizes for apples as follows:

Large fruited varieties: 70 mm for "Extra" Class; 65 mm for Classes I and II

Other varieties: 60 mm for "Extra" Class; 55 mm for Classes I and II

⁵ New Zealand, Chile and South Africa do not consider there to be an effective correlation between fruit sized by weight and the requirements for minimum diameter. New Zealand will propose that separate minimum requirements for weight sizing be included in the standard once further data has been obtained on this and the related issue of maturity requirements.

When size is determined by weight the minimum weight required for each class is as follows:

	<u>Extra</u>	<u>Class I</u>	<u>Class II</u>
<u>Large fruited varieties</u>	110g	90g	90g
<u>Other varieties</u>	90g	80g	70g

To ensure there is uniformity of size:

For fruit sized according to the diameter, the difference in diameter between fruit in the same package shall be limited to:

- 5 mm for "Extra" Class fruit and for Class I and II fruit packed in rows and layers⁶
- 10 mm for Class I fruit packed loose in the package or in consumer packages.⁷

For fruit sized according to weight, the difference in weight between fruit in the same package shall be limited to :

- 20% of the average individual fruit weight in the package for Class Extra and for Class I and II fruit packed in rows and layers
- 25% of the average individual fruit weight in the package for Class I fruit packed loose in the package or in consumer packages.

There is no sizing uniformity limit for Class II fruit packed loose in the package or in consumer 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 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 not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.
- (iii) *Class II*
10 per cent by number or weight of apples 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 However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger, the difference in diameter may amount to 10 mm.

⁷ However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger the difference in diameter may amount to 20 mm.

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 diameter when size is determined by diameter
 - 10g below the minimum weight when size is determined by weight;
- (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 diameter size when size is determined by diameter
 - 10 g below the minimum weight when size is determined by weight

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only apples 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 and origin are not required for apples in consumer packages of a net weight not exceeding 5 kg.

B. Packaging

The apples must be packed in such a way as to protect the produce properly. In particular, consumer packages of a net weight exceeding 3kg shall be sufficiently rigid to ensure proper protection of the produce.

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.

Stickers individually affixed on 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.

C. Presentation

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

VI. PROVISIONS CONCERNING MARKING

Each package⁸ 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. ⁹

B. Nature of produce

- "Apples", if the contents are not visible from the outside
- Name of the variety
In the case of consumer packages containing a mixture of apples of different varieties, names of the different varieties.

C. Origin of produce

- Country of origin and, optionally, district where grown, or national, regional or local place name.
In the case of consumer packages containing a mixture of varieties of apples of different origins, the indication of each country of origin shall appear next to the name of the variety concerned.

D. Commercial specifications

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

⁸ Consumer packages 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.

⁹ 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.

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

- (a) for produce subject to the uniformity rules, as minimum and maximum diameters or minimum and maximum weight;
- (b) for produce not subject to the uniformity rules, the diameter or weight of the smallest fruit in the package followed by 'and over' or equivalent denomination or, if appropriate the diameter or weight of the largest fruit in the package.

E. Official control mark (optional)

Published 2002¹⁰
Revised 2003, 2005

¹⁰ This text was previously part of a combined standard for apples and pears (FFV-01), published 1960 with revisions 1996, 2000. An explanatory brochure for this standard was published by the OECD Scheme.

PART II: UNECE Recommendation for Apples for a two-year trial period

This text is in trial period until November 2007. Additions to the existing text have been underlined and deletions have been marked with strike-out.

Amend the last paragraph in the section on Minimum maturity requirements to read:

In order to verify the minimum maturity requirements, several parameters can be considered (e.g.: morphological aspect, taste, firmness and refractometric index) and, if refractometric index of the flesh is measured, the Brix degree must be greater than or equal to 9°. However, for the varieties Annurca, Cripps Pink, Fuji, Golden Delicious, Pinova, Rafzubex, Rafzubin, and their mutants, this value must be greater than or equal to 10°.