

# codex alimentarius commission

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FOOD AND AGRICULTURE  
ORGANIZATION  
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WORLD  
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Agenda Item 2(c)

CX/FFV 09/15/4

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

Fifteenth Session

Mexico City, Mexico, 19 – 23 October 2009

### UNECE STANDARDS FOR FRESH FRUITS AND VEGETABLES

#### BACKGROUND

1. As established in the Terms of Reference of the Codex Committee on Fresh Fruits and Vegetables, the Committee is entrusted to elaborate worldwide standards and codes of practice as may be appropriate for fresh fruits and vegetables. This task should perform in consultation with the UNECE Working Party on Agricultural Quality Standards with particular regard to ensuring that there is not duplication of standards or codes of practice and that they follow the same broad format.<sup>1</sup>
2. In regard to cooperation between UNECE and Codex in the elaboration of fresh fruit and vegetables standards, the need for close cooperation in order to avoid duplication was reiterated by the 43<sup>rd</sup> Session of the Executive Committee (June 1996), and the suggestion was made that UNECE standards should be used as a starting point for draft Codex Standards where appropriate. On that occasion, the Executive Committee requested that relevant UNECE standards be distributed as working documents for the Codex Committee on Fresh Fruits and Vegetables when like products were being considered.<sup>2</sup>
3. In addition, the 46<sup>th</sup> Session of the CCEXEC (June 1999) stressed the need for exchanges of information between the two parties concerned while recognizing that harmonization of standards for these commodities was important and that the broadest possible consensus on all international standards needed to be achieved.<sup>3</sup>
4. The Codex Alimentarius Commission has also stressed the need for the CCFFV to cooperate and coordinate with the UNECE towards the elaboration of harmonized standards without duplication of effort. While avoiding any unnecessary duplication of work, the collaboration would benefit both Codex and UNECE by allowing the Commission to use UNECE standards as a base for developing Codex standards and in doing so to give UNECE the international recognition to its standards.<sup>4</sup>
5. Since the CCFFV is currently discussing the draft Standard for Apples as well as the proposed draft revision to the Standard for Avocado, for which there are already UNECE standards, the Codex Secretariat, in compliance with the recommendation of the Executive Committee, has attached to this document the UNECE Standards for Apples and Avocados for consideration by the Committee when discussing the corresponding Codex standards at its next Session.
6. This document should be considered jointly with working documents CX/FFV 09/15/3 (matters arising from UNECE and OECD), CX/FFV 09/15/6 (apples) and CX/FFV 09/15/7 (avocado).

<sup>1</sup> Codex Alimentarius Procedural Manual, Section IV, Subsidiary Bodies of the Codex Alimentarius Commission, available for downloading at: <http://www.codexalimentarius.net/> under About Codex, Rules and Procedure & Codex Policy.

<sup>2</sup> ALINORM 97/3, para. 15.

<sup>3</sup> ALINORM 99/4, para. 19.

<sup>4</sup> ALINORM 95/37, para. 32 & ALINORM 99/37, para. 206.

**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.

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
- for products graded in classes other than the “Extra” Class, 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.

**A. Minimum requirements**

In all classes, subject to the special provisions for each class and the tolerances allowed, the 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
- free from damage caused by pests affecting the flesh
- free of abnormal external moisture
- free of any foreign smell and/or taste.

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

- to withstand transportation and handling
- to arrive in satisfactory condition at the place of destination.

**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 characteristics.<sup>1</sup>

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

**C. Classification**

Apples are classified in three classes, as defined below:

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<sup>1</sup> 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.

**(i) “Extra” Class**

Apples in this class must be of superior quality. In shape, size and colouring they must be characteristic of the variety<sup>2</sup> 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.<sup>2</sup>

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
- slight defects in colouring
- slight bruising not exceeding 1 cm<sup>2</sup> in area and not discoloured
- slight skin defects, which must not extend over more than:
  - 2 cm in length for defects of elongated shape
  - 1 cm<sup>2</sup> of the total surface area for other defects, with the exception of scab (*Venturia inaequalis*), which must not extend over more than 0.25 cm<sup>2</sup>, cumulative, in area.

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

**(iii) Class II**

This class includes apples that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above.<sup>2</sup>

The flesh must be free from major defects.

The following defects may be allowed, provided the apples retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape
- defects in colouring
- slight bruising not exceeding 1.5 cm<sup>2</sup> in area which may be slightly discoloured
- skin defects, which must not extend over more than:
  - 4 cm in length for defects of elongated shape
  - 2.5 cm<sup>2</sup> total surface area for other defects, with the exception of scab (*Venturia inaequalis*), which must not extend over more than 1 cm<sup>2</sup>, cumulative, in area.

**III. PROVISIONS CONCERNING SIZING**

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

For all varieties and for all classes the minimum size is 60 mm, if measured by diameter, or 90 g, if measured by weight. Fruit of smaller sizes may be accepted, if the Brix level of the produce greater than or equal to 10.5° Brix and the size is not smaller than 50 mm or 70 g.

To ensure uniformity in size:

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<sup>2</sup> The criteria for colouring and russeting as well as a non-exhaustive list of varieties are set out in the annex to this standard.

(a) For fruit sized by diameter, the difference in diameter between fruit in the same package shall be limited to:

- 5 mm for “Extra” Class fruit and for Classes I and II fruit packed in rows and layers<sup>3</sup>
- 10 mm for Class I fruit packed loose in the package or in consumer packages.<sup>4</sup>

(b) For fruit sized by weight:

- For “Extra” Class and Class I apples packed in rows and layers, the difference in weight between the lightest and the heaviest fruit in the same package shall be limited to:

Range (g)	Weight difference (g)
70-90	15 g
91-135	20 g
136-200	30 g
201-300	40 g
> 301	50 g

- For Class I fruit packed loose in the package or in consumer packages, the difference in weight between the heaviest and the lightest fruit shall be limited to:

Range (g)	Uniformity (g)
70-135	35
136-300	70
> 301	100

There is no sizing uniformity requirement 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 lot for produce not satisfying the requirements of the class indicated.

##### A. Quality tolerances

###### (i) “Extra” Class

A total tolerance of 5 per cent, by number or weight, of apples 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.

###### (ii) Class I

A total tolerance of 10 per cent, by number or weight, of apples 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 neither satisfying 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.

###### (iii) Class II

A total tolerance of 10 per cent, by number or weight, of apples 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.

<sup>3</sup> However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger, the difference in diameter may amount to 10 mm.

<sup>4</sup> 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 watercore
- 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 total tolerance of 10 per cent, by number or weight, of apples not satisfying the requirements as regards sizing is allowed. This tolerance may not be extended to include produce with a size:

- 5 mm below the minimum diameter, 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 3 kg shall be sufficiently rigid to ensure proper protection of the produce.

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 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 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.

### **VI. PROVISIONS CONCERNING MARKING**

Each package<sup>5</sup> 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 physical address (e.g. street/city/region/postal code and,
and/or	)	if different from the country of origin, the country) or
Dispatcher/shipper)		a code mark officially recognized by the national authority <sup>6</sup> .

<sup>5</sup> 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”.

<sup>6</sup> 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.

**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.

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 2002<sup>7</sup>

Last revised 2008

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<sup>7</sup> The text of the standard for apples was previously part of a combined standard for apples and pears (FFV-01), published in 1960 and revised in 1996 and 2000. The OECD Scheme for the Application of International Standards for Fruit and Vegetables has published an explanatory illustrated brochure on the application of that standard. The publication may be obtained from the OECD bookshop at: [www.oecdbookshop.org](http://www.oecdbookshop.org).

**Annex****Non-Exhaustive List of Apple Varieties**<sup>8</sup>

Some of the varieties listed in the following may be marketed under names for which trademark protection has been sought or obtained in one or more countries. Names believed by the United Nations to be varietal names are listed in the first column. Other names by which the United Nations believes the variety may be known are listed in the second column. Neither of these two lists is intended to include trademarks. References to known trademarks have been included in the third column for information only. The presence of any trademarks in the third column does not constitute any licence or permission to use that trademark – such licence must come directly from the trademark owner. In addition, the absence of a trademark in the third column does not constitute any indication that there is no registered/pending trademark for such a variety.<sup>9</sup>

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<sup>8</sup> Fruits of varieties that are not part of the list must be graded according to their varietal characteristics. Coloured and/or large fruited varieties as well as those showing a characteristic russeting should be included in the list to provide information about the varietal characteristics. The update of the list may be requested through the Specialized Section for the Standardization of Fresh Fruit and Vegetables.

<sup>9</sup> Some of the varietal names listed in the first column may indicate varieties for which patent protection has been obtained in one or more countries. Such proprietary varieties may only be produced or traded by those authorized by the patent holder to do so under an appropriate licence. The United Nations takes no position as to the validity of any such patent or the rights of any such patent-holder or its licensee regarding the production or trading of any such variety.

The United Nations endeavoured to ensure that no trademark names are listed in columns 1 and 2 of the table. However, it is the responsibility of any trademark owner to notify the United Nations promptly if a trademark name has been included in the table and to provide the United Nations (see address below) with an appropriate varietal, or generic name for the variety, as well as adequate evidence ownership of any applicable patent or trademark regarding such variety so that the list can be amended. Provided that no further information is needed from the trademark holder, the Working Party on Agricultural Quality Standards will change the list accordingly at the session following receipt of the information. The United Nations takes no position as to the validity of any such trademarks or the rights of any such trademark owners or their licensees.

Variety/ Variété/ Разновидность	Synonyms/ Synonymes/ Синонимы	Trade names/ Marque commerciale/ Товарное наименование	Colour group/ Groupe de coloration/ Группа окраски	Russeting/ Roussissement/ Степень буроватости	Size/ Calibre/ Размер
African Red		African Carmine <sup>TM</sup>	B		
Akane	Tohoku 3	Primerouge <sup>®</sup>	B		
Alborz Seedling			C		
Aldas			B		
Alice			B		
Alkmene	Early Windsor		C		
*Alro			B		
Alwa			B		
*Amasya			B		
Angold			C		L
*Antej	Antei		B		L
Apollo	Beauty of Blackmoor		C		L
Arkcharm	Arkansas No 18, A 18		C		L
Arlet			B	R	
Aroma			C		
Red coloured mutants of Aroma e. g.			B		
Amorosa			B		
Auksis			B		
*Beacon			A		L
Belfort	Pella		B		
Belle de Boskoop and mutants				R	L
Belle fleur double					L
*Belorusskoje Maĭnovoje	Belorusskoe Malinovoe, Byelorusskoe Malinovoe		B		
Berlepsch	Freiherr von Berlepsch		C		
Berlepsch rouge	Red Berlepsch, Roter Berlepsch		B		
Blushed Golden					L
*Bogatir	Bogatyr				L
Bohemia			B		L
Boskoop rouge	Red Boskoop, Roter Boskoop		B	R	L
Braeburn			B		L
Red coloured mutants of Braeburn e. g.			A		L



## UNECE STANDARD FFV-50: Apples

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Hidala		Hillwell ®	A		L
Joburn		Aurora™, Red Braeburn™, Southern Rose™	A		L
Lochbuie Red Braeburn			A		L
Mahana Red		Redfield ®	A		L
Mariri Red		Eve™, Red Braeburn™, Southern Rose™	A		L
Redfield		Red Braeburn™, Southern Rose™	A		L
Royal Braeburn			A		L
Bramley's Seedling	Bramley, Triomphe de Kiel				L
Brettacher Sämling					L
Calvilles, Groupe des					L
Cardinal			B		
Carola	Kalco		C		L
Caudle		Cameo™	B		
Charden					L
Charles Ross					L
Civni		Rubens ®	B		
Coromandel Red	Corodel		A		
Cortland			B		L
Cox's Orange Pippin and mutants	Cox orange		C	R	
Red coloured mutants of Cox's Orange Pippin e. g.			B	R	
Cherry Cox			B	R	
Crimson Bramley					L
Cripps Pink		Pink Lady ®	C		
Cripps Red		Sundowner™	C <sup>10</sup>		

<sup>10</sup> With minimum 20% for Class I and Class II.  
Avec un minimum de 20 % pour les catégories I et II.  
Минимум 20% для первого и второго сортов.

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Dalinbel			B		
Delblush		Tentation ®			L
Delcorf and mutants e. g.		Delbarestivale ®	C		L
Dalili		Ambassy ®	C		L
Monidel			C		L
Delgollune		DELBARD JUBILÉ ®	B		L
Delicious ordinaire	Ordinary Delicious		B		
Deljeni		Primgold ®			L
Delikates			B		
Delor			C		L
Discovery			C		
*Doč Melbi	Doch Melbi		C		L
Dunn's Seedling				R	
Dykman's Zoet			C		
Egremont Russet				R	
Elan					L
Elise	Red Delight	Roblos ®	A		L
Ellison's orange	Ellison		C		L
Elstar and mutants e. g.			C		
Daliter		Elton™	C		
Elshof			C		
Elstar Armhold			C		
Elstar Reinhardt			C		
Red coloured mutants of Elstar e.g.			B		
Bel-El		Red Elswout™	B		
Daliest		Elista™	B		
Goedhof		Elnica™	B		
Red Elstar			B		
Valstar			B		
Empire			A		
Falstaff			C		
Fiesta	Red Pippin		C		
Florina		Querina ®	B		L

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*Forele			B		
Fortune				R	
Fuji and mutants			B		L
Gala			C		
Red coloured mutants of Gala e. g.			A		
Annaglo			A		
Baigent		Brookfield ®	A		
Galaxy			A		
Mitchgla		Mondial Gala ®	A		
Obrogala			A		
Regala			A		
Regal Prince		Gala Must ®	A		
Tenroy		Royal Gala ®	A		
Garcia					L
Ginger Gold					L
Gloster			B		L
Goldbohemia					L
Golden Delicious and mutants					L
Golden Russet				R	
Golden Supreme	Gradigold, Golden Extreme				L
Goldrush	Coop 38				L
Goldstar					L
Granny Smith					L
Gravenstein rouge	Red Gravenstein, Roter Gravensteiner		B		L
Gravensteiner	Gravenstein				L
Greensleeves					L
Holsteiner Cox and mutants	Holstein			R	
Holstein rouge	Red Holstein, Roter Holsteiner Cox		C	R	
Honeycrisp		Honeycrunch ®	C		L
Honey gold					L
Horneburger					L
Howgate Wonder	Manga				L
Idared			B		L

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*Iedzēnu			B		L
*Ilga			B		L
Ingrid Marie			B	R	
*Iron		Demir Apple	C	R	L
Isbranica			C		
Jacob Fisher					L
Jacques Lebel					L
Jamba			C		L
James Grieve and mutants					L
James Grieve rouge		Red James Grieve	B		L
Jarka			C		L
Jerseymac			B		
Jester					L
Jonagold <sup>11</sup> and mutants e. g.			C		L
Crowngold			C		L
Daligo			C		L
Daliguy	Jonasty		C		L
Dalijeau	Jonamel		C		L
Jonagold 2000	Excel		C		L
Jonabel			C		L
Jonabres			C		L
King Jonagold			C		L
New Jonagold	Fukushima		C		L
Novajo	Veulemanns		C		L
Schneica	Jonica		C		L
Wilmuta			C		L
Jonagored and similar			A		L
coloured mutants of Jonagold e. g.			A		L
Decosta			A		L
Jomured	Van de Poel		A		L

<sup>11</sup> However, for the variety Jonagold at least one-tenth of the surface of the fruit in Class II must be striped with red colouring.

Toutefois, pour la variété Jonagold de la catégorie II, au moins 1/10 de la surface du fruit doit être de coloration rouge striée.

Однако у разновидности Jonagold по меньшей мере 1/10 поверхности плода второго сорта должна иметь полосы красного цвета.

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Jonagold Boerekamp		Early Queen ®	A		L
Jomar		Marnica ®	A		L
Jonagored Supra			A		L
Jonaveld		First Red ®	A		L
Primo			A		L
Romagold	Surkijn		A		L
Rubinstar			A		L
Red Jonaprince		Wilton's ®, Red Prince ®	A		L
Jonalord			C		
Jonathan			B		
Julia			B		
Jupiter					L
Karmijn de Sonnaville			C	R	L
Katja	Katy		B		
Kent				R	
Kidd's Orange Red			C	R	
Kim			B		
*Koit			C		
*Koričnoje Novoje	Korichnoe Novoe, Korichnevoe Novoe		C		L
*Kovaļenkovskoje			B		
*Krameri Tuvioun			B		
*Kukikovskoje			B		
Lady Williams			B		L
Lane's Prince Albert					L
Laxton's Superb			C	R	
Ligol			B		L
Lobo			B		
Lodel			A		
Lord Lambourne			C		
Maigold			B		
McIntosh			B		
*Meelis			B		L
*Melba			C		
Melodie			B		L
Melrose			C		L

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Meridian			C		
Moonglo			C		
Morgenduft	Imperatore		B		L
Mutsu		Crispin ®			L
*Noris			B		
Normanda			C		L
Nueva Europa			C		
Nueva Orleans			B		L
Odin			B		
Ontario			B		L
*Orlik			B		
Orlovskoje polosatoje			C		
Ozark Gold					L
Paula Red			B		
Pero de Cirio					L
Piglos			B		L
Pikant			B		L
Pikkolo			C		
Pilot			C		
Pimona			C		
Pinova		Corail ®	C		
Pirella		Pirol ®	B		L
Piros			C		L
*Prima			B		L
Rafzubex		RubINETTE ® Rosso	A		
Rafzubin		RubINETTE ®	C		
Rajka			B		
Rambour d'hiver					L
Rambour Franc			B		
Reanda			B		L
Rebella			C		L
Red Delicious and mutants e. g.			A		L
Erovan	Early Red One		A		L
Fortuna Delicious			A		L
Oregon	Oregon Spur Delicious		A		L

## UNECE STANDARD FFV-50: Apples

Variety/ Variété/ Разновидность	Synonyms/ Synonymes/ Синонимы	Trade names/ Marque commerciale/ Товарное наименование	Colour group/ Groupe de coloration/ Группа окраски	Russetting/ Roussissement/ Степень буроватости	Size/ Calibre/ Размер
Otago			A		L
Red Chief			A		L
Red King			A		L
Red Spur			A		L
Red York			A		L
Richared			A		L
Royal Red			A		L
Shotwell Delicious			A		L
Stark Delicious			A		L
Starking			A		L
Starkrimson			A		L
Starkspur			A		L
Topred			A		L
Well Spur			A		L
Red Dougherty			A		
Red Rome			A		
Redkroft			A		
Regal			A		
Regina			B		L
Reglindis			C		L
Reine des Reinettes	Gold Parmoné, Goldparmäne		C		
Reineta Encarnada			B		
Reinette Rouge du Canada			B		L
Reinette de Orléans					L
Reinette Blanche du Canada	Reinette du Canada, Canada Blanc, Kanadarenette			R	L
Reinette de France					L
Reinette de Landsberg					L
Reinette grise du Canada	Graue Kanadarenette			R	L
Relinda			C		
Remo			B		
Renora			B		L
Resi			B		
Resista					L
Retina			B		L
Rewena			B		L
Roja de Benejama	Verruga, Roja del Valle,		A		

## UNECE STANDARD FFV-50: Apples

Variety/ Variété/ Разновидность	Synonyms/ Synonymes/ Синонимы	Trade names/ Marque commerciale/ Товарное наименование	Colour group/ Groupe de coloration/ Группа окраски	Russeting/ Roussissement/ Степень буроватости	Size/ Calibre/ Размер
	Clavelina				
Rome Beauty	Belle de Rome, Rome		B		
Rosana			B		L
Royal Beauty			A		L
Rubin (Czech cultivar)			C		L
*Rubin (Kazakhstan cultivar)			B		L
Rubinola			B		L
*Rudens Svītrainais	Osennee Polosatoe, Rudeninis Dryzuotasis, Rudens Svitrotais, Streifling, Streifling Herbst, Sūgisjooņik, Syysjuovikas and numerous others		C		L
*Saltanat			B		
Sciearly		Pacific Beauty™	A		
Scifresh		Jazz™	B		
Sciglo		Southern Snap™	A		
Sciray	GS48		A		
Scired		Pacific Queen™	A	R	
Sciros		Pacific Rose™	A		L
Selena			B		L
Shampion			B		L
*Sidrunkollane Talioun					L
Sinap Orlovskij					L
Snygold	Earlygold				L
Sommerregent			C		
Spartan			A		
Splendour			A		
St. Edmunds Pippin				R	
Starks's Earliest			C		
Štaris	Staris		A		
Sturmer Pippin				R	
Summerred			B		
*Sūgisdessert			C		L
Sunrise			A		
Sunset				R	
Suntan				R	L



## UNECE STANDARD FFV-50: Apples

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Sweet Caroline			C		L
*Talvenauding			B	R	
*Tellisaare			B		
*Tiina	Tina		C		L
Topaz			B		
Tydeman's Early Worcester	Tydeman's Early		B		L
*Veteran			B		
Vista Bella	Bellavista		B		
Wealthy			B		
Worcester Pearmain			B		
York			B		
*Zailijskoje	Zailiyskoe		B		
*Žigulovskoje	Zhigulevskoe		C		L

**DEFINITIONS****1. COLOURING, CRITERIA FOR APPLES, COLOUR GROUPS AND CODES**

Colour group	A	B	C
	total surface area of red colouring characteristic of the variety	total surface area of mixed red colouring characteristic of the variety	total surface area of slightly red coloured, blushed or striped characteristic of the variety
Class Extra	3/4	1/2	1/3
Class I	1/2	1/3	1/10
Class II	1/4	1/10	–

**2. RUSSETING CRITERIA FOR APPLES**

R = Variety for which russeting is a characteristic of the skin and not a defect if it corresponds to the typical appearance of the variety.

For varieties not marked with an “R” in the list below, russeting is allowed within the following limits

	Extra	I	II	Tolerances for Class II
<b>(i) Brown patches</b>	not outside the stem cavity	may go slightly beyond the stem or pistil cavities	may go beyond the stem or pistil cavities	fruit not seriously detracting from the appearance and condition of the package
	not rough	not rough	slightly rough	
<b>(ii) Russeting</b>		Maximum surface area of the fruit permitted		
<b>thin net-like russeting</b> (not contrasting strongly with the general colouring of the fruit)	slight and isolated traces of russeting not altering the general appearance of the fruit or of the package	1/5	1/2	fruit not seriously detracting from the appearance and condition of the package
<b>Heavy</b>	None	1/20	1/3	fruit not seriously detracting from the appearance and condition of the package
<b>Cumulative defects</b> (with the exception of brown patches which are excluded from these cumulative defects) In no case may thin russeting and heavy russeting taken together exceed a maximum of:		1/5	1/2	fruit not seriously detracting from the appearance and condition of the package

**3. SIZE CRITERIA FOR APPLES**

L = Large fruited variety

**STANDARD FFV-42**  
concerning the marketing and  
commercial quality control of  
**AVOCADOS**

**I. DEFINITION OF PRODUCE**

This standard applies to avocados of varieties (cultivars) grown from *Persea americana Mill.* to be supplied fresh to the consumer, parthenocarpic fruit and avocados for industrial processing being excluded.

**II. PROVISIONS CONCERNING QUALITY**

The purpose of the standard is to define the quality requirements of avocados 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
- for products graded in classes other than the “Extra” Class, 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.

**A. Minimum requirements**

In all classes, subject to the special provisions for each class and the tolerances allowed, the avocados 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
- free from damage caused by pests affecting the flesh
- free of damage caused by low temperature
- having a stalk not more than 10 mm in length which must be cut off cleanly.  
However, its absence is not considered a defect on condition that the place of the stalk attachment is dry and intact
- free of abnormal external moisture
- free of any foreign smell and/or taste.<sup>1</sup>

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

- to withstand transportation and handling
- to arrive in satisfactory condition at the place of destination.

**B. Maturity requirements**

The development of the avocados should have reached a physiological stage, which will ensure a continuation of the ripening process to completion.

The fruit should have a minimum dry matter content, to be measured by drying to constant weight:

21 % for the variety Hass

20 % for the varieties Fuerte, Pinkerton, Reed and Edranol

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<sup>1</sup> The use of preserving agents or any other chemical substance liable to leave a foreign smell on the skin of the fruit is permitted where it is compatible with the regulations of the importing country.

19 % for the other varieties except for Antillian varieties<sup>2</sup> that may show a lower dry matter content.

The ripe fruit should be free from bitterness.

### C. Classification

Avocados are classified in three classes, as defined below:

#### (i) "Extra" Class

Avocados in this class must be of superior quality. In shape and colouring 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 produce, the quality, the keeping quality and presentation in the package. If present, the stalk must be intact.

#### (ii) Class I

Avocados 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
- slight skin defects (corkiness, healed lenticels) and sunburn, provided they are not progressive; the maximum total area should not exceed 4 cm<sup>2</sup>.

In no case may the defects affect the fruit flesh.

The stalk, if present, may be slightly damaged.

#### (iii) Class II

This class includes avocados 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 avocados retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape
- defects in colouring
- skin defects (corkiness, healed lenticels) and sunburn, provided they are not progressive; the maximum total area should not exceed 6 cm<sup>2</sup>.

In no case may the defects affect the fruit flesh.

The stalk, if present, may be damaged.

### III. PROVISIONS CONCERNING SIZING

Size is determined by the weight of the fruit.

Minimum weight for avocados is 123 g except for Hass where it is 80 g.

The size scale is as follows:

Size code	Weight scale (g)
4	781 to 1220
6	576 to 780

<sup>2</sup> Reservation from the United States: Antillean varieties should not be included in the standard because they are substantially different.

## UNECE STANDARD FFV-42: Avocados

8	456 to 576
10	364 to 462
12	300 to 371
14	258 to 313
16	227 to 274
18	203 to 243
20	184 to 217
22	165 to 196
24	151 to 175
26	144 to 157
28	134 to 147
30	123 to 137
S <sup>3</sup>	80 to 123 (Hass variety only)

**IV. PROVISIONS CONCERNING TOLERANCES**

Tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements for the class indicated.

**A. Quality tolerances****(i) "Extra" Class**

A total tolerance of 5 per cent, by number or weight, of avocados 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.

**(ii) Class I**

A total tolerance of 10 per cent, by number or weight, of avocados 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 neither satisfying 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.

**(iii) Class II**

A total tolerance of 10 per cent, by number or weight, of avocados 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.

**B. Size tolerances**

For all classes: a total tolerance of 10 per cent, by number or weight, of avocados conforming to the size range immediately below and/or above that mentioned in the marking.

**V. PROVISIONS CONCERNING PRESENTATION****A. Uniformity**

The contents of each package must be uniform and contain only avocados of the same origin, variety, quality, colouring<sup>4</sup> and size.

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

**B. Packaging**

The avocados must be packed in such a way as to protect the produce properly.

<sup>3</sup> The difference between the smallest and largest fruit within a package should not be more than 25 g.

<sup>4</sup> A change in the colour of the dark-skinned varieties is not considered as a defect, but the colouring of the fruit in each package must be uniform at the point of dispatch.

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 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.

## VI. PROVISIONS CONCERNING MARKING

Each package<sup>5</sup> 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 physical address (e.g. street/city/region/postal code and,  
and/or ) if different from the country of origin, the country) or  
Dispatcher/shipper ) a code mark officially recognized by the national authority.<sup>6</sup>

### B. Nature of produce

- "Avocados", if the contents are not visible from the outside
- Name of the variety.

### C. Origin of produce

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

### D. Commercial specifications

- Class
- Size expressed in minimum and maximum weight
- Code number of the size scale and number of fruits when it is different from code number or, optionally, code number of the size scale and the net weight of the package.

### E. Official control mark (optional)

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The OECD Scheme for the Application of International Standards for Fruit and Vegetables has published an explanatory illustrated brochure on the application of this standard. The publication may be obtained from the OECD bookshop at: [www.oecdbookshop.org](http://www.oecdbookshop.org).

<sup>5</sup> 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".

<sup>6</sup> 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.