

COMMISSION IMPLEMENTING REGULATION (EU) No 543/2011

of 7 June 2011

laying down detailed rules for the application of
Council Regulation (EC) No 1234/2007 in respect of the fruit and
vegetables and processed fruit and vegetables sectors.

CONSOLIDATED TEXT: Annex I; Part 1 of Part B

MARKETING STANDARD FOR 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 for apples, after preparation and packaging.

However, at stages following dispatch 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 “Extra” Class, a slight deterioration due to their development and their tendency to perish.

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,
- free from damage caused by pests affecting the flesh,
- free from serious watercore, except for varieties marked with “V” listed in the appendix to this standard,
- 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, and
- to arrive in satisfactory condition at the place of destination.

B. 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.

In order to verify the minimum maturity requirements, several parameters may be considered (for example morphological aspect, taste, firmness and refractometric index).

C. Classification

Apples are classified in three classes defined below.

(i) "Extra" Class

Apples in this class must be of superior quality. They must be characteristic of the variety¹ and with the stalk which must be intact.

Apples must express the following minimum surface colour characteristic of the variety:

- $\frac{3}{4}$ of total surface red coloured in case of colour group A,
- $\frac{1}{2}$ of total surface mixed red coloured in case of colour group B,
- $\frac{1}{3}$ of total surface slightly red coloured, blushed or striped in case of colour group C,
- no minimum colour requirement in case of colour group D.

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 produce, the quality, the keeping quality and presentation in the package:

¹ A non-exhaustive list of varieties providing a classification on colouring and russetting is set out in the appendix to this standard.

- very slight skin defects,
- very slight russeting² such as:
 - brown patches that may not go outside the stem cavity and may not be rough and/or
 - slight isolated traces of russeting.

(ii) Class I

Apples in this class must be of good quality. They must be characteristic of the variety³.

Apples must express the following minimum surface colour characteristic of the variety:

- $\frac{1}{2}$ of total surface red coloured in case of colour group A,
- $\frac{1}{3}$ of total surface mixed red coloured in case of colour group B,
- $\frac{1}{10}$ of total surface slightly red coloured, blushed or striped in case of colour group C,
- no minimum colour requirement in case of colour group D.

The flesh must be perfectly sound.

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,
- a slight defect in development,
- a slight defect in colouring,
- slight bruising not exceeding 1 cm² of total surface area and not discoloured,
- slight skin defects which must not extend over more than:
 - 2 cm in length for defects of elongated shape,

² Varieties marked with "R" in the appendix to this standard are exempt from the provisions on russeting.

³ A non-exhaustive list of varieties providing a classification on colouring and russeting is set out in the appendix to this standard.

- 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 russeting⁴ such as:
 - brown patches that may go slightly beyond the stem or pistil cavities but may not be rough and/or
 - thin net-like russeting not exceeding $\frac{1}{5}$ of the total fruit surface and not contrasting strongly with the general colouring of the fruit and/or
 - dense russeting not exceeding $\frac{1}{20}$ of the total fruit surface, while
 - thin net-like russeting and dense russeting taken together may not exceed a maximum of $\frac{1}{5}$ of the total surface of the fruit.

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.

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 development,
- defects in colouring,
- slight bruising not exceeding 1.5 cm² 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 cm² of 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;

⁴ Varieties marked with "R" in the appendix to this standard are exempt from the provisions on russeting.

- slight russeting⁵ such as:
 - brown patches that may go beyond the stem or pistil cavities and may be slightly rough and/or
 - thin net-like russeting not exceeding $\frac{1}{2}$ of the total fruit surface and not contrasting strongly with the general colouring of the fruit and/or
 - dense russeting not exceeding $\frac{1}{3}$ of the total fruit surface, while
 - thin net-like russeting and dense russeting taken together may not exceed a maximum of $\frac{1}{2}$ of the total surface of the fruit.

III. PROVISIONS CONCERNING SIZING

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

The minimum size shall be 60 mm, if measured by diameter or 90 g, if measured by weight. Fruit of smaller sizes may be accepted, if the Brix level⁶ of the produce is equal to or greater than to 10.5° Brix and the size is not smaller than 50 mm or 70 g.

To ensure the uniformity in size, the range in size between produce in the same package shall not exceed:

(a) for fruit sized by diameter:

- 5 mm for "Extra" Class fruit and for Classes I and II fruit packed in rows and layers. However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger, the difference in diameter may amount to 10 mm, and
- 10 mm for Class I fruit packed in sales packages or loose in the package. However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger, the difference in diameter may amount to 20 mm.

⁵ Varieties marked with "R" in the appendix to this standard are exempt from the provisions on russeting.

⁶ Calculated as described in the OECD guidance on objective tests, available at <http://www.oecd.org/agriculture/fruit-vegetables/publications>.

(b) for fruit sized by weight:

- For "Extra" Class and Classes I and II apples packed in rows and layers:

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

- For Class I fruit packed in sales packages or loose in the package:

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

There is no sizing uniformity requirement for Class II fruit packed in sales packages or loose in the package.

Varieties of miniature apples, marked with an "M" in the appendix to this standard, are exempted from the sizing provisions. Those miniature varieties must have a minimum Brix level⁷ of 12°.

IV. PROVISIONS CONCERNING TOLERANCES

At all marketing stages, 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 %, 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 % in total may consist of produce satisfying the requirements of Class II quality.

(ii) Class I

A total tolerance of 10 %, 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 % in total may consist of produce satisfying neither the

⁷ Calculated as described in the OECD guidance on objective tests, available at <http://www.oecd.org/agriculture/fruit-vegetables/publications>.

requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

(iii) Class II

A total tolerance of 10 %, by number or weight, of apples satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 % in total may consist of produce affected by decay.

B. Size tolerances

For all classes: a total tolerance of 10 %, 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 or more below the minimum diameter,
- 10 g or more below the minimum 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.

However, a mixture of apples of distinctly different varieties may be packed together in a sales package provided they are uniform in quality and, for each variety concerned, in origin. Uniformity in size is not required.

The visible part of the contents of the package must be representative of the entire contents. Information lasered on single fruit should not lead to flesh or skin defects.

B. Packaging

The apples must be packed in such a way as to protect the produce properly. In particular, sales 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 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 package⁸ must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside.

A. Identification

Name and physical address of the packer and/or the dispatcher (for example: street/city/region/postal code and, if different from the country of origin, the country).

This mention may be replaced:

- for all packages with the exception of pre-packages, by the officially issued or accepted code mark representing the packer and/or the dispatcher, indicated in close connection with the reference "Packer and/or Dispatcher" (or equivalent abbreviations). The code mark shall be preceded by the ISO 3166 (alpha) country/area code of the recognising country, if not the country of origin;
- for pre-packages only, by the name and the address of a seller established within the Union indicated in close connection with the mention "Packed for:" or an equivalent mention. In this case, the labelling shall also include a code representing the packer and/or the dispatcher. The seller shall give all information deemed necessary by the inspection body as to the meaning of this code.

B. Nature of produce

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

The name of the variety may be replaced by a synonym. A trade name⁹ may only be given in addition to the variety or synonym.

In the case of mutants with varietal protection, this variety name may replace the basic variety name. In case of mutants without varietal protection, this mutant name may only be indicated in addition to the basic variety name.

- "Miniature variety", where appropriate.

⁸ These marking provisions do not apply to sales packages presented in packages. However, they do apply to sales packages presented separately.

⁹ A trade name can be a trade mark for which protection has been sought or obtained or any other commercial denomination.

C. Origin of produce

Country of origin¹⁰ and, optionally, district where grown, or national, regional or local place name.

In the case of a mixture of distinctly different 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 weights;

(b) optionally, for produce not subject to the uniformity rules, as the diameter or the weight of the smallest fruit in the package followed by "and over" or equivalent denomination or, where appropriate, followed by the diameter or weight of the largest fruit in the package.

E. Official control mark (optional)

Packages need not to bear the particulars mentioned in the first subparagraph, when they contain sales packages, clearly visible from the outside, and all bearing these particulars. These packages shall be free from any indications such as could mislead. When these packages are palletised, the particulars shall be given on a notice placed in an obvious position on at least two sides of the pallet.

¹⁰ The full or commonly used name shall be indicated.

APPENDIX

Non-exhaustive list of apple varieties

Fruits of varieties that are not part of the list must be graded according to their varietal characteristics.

Some of the varieties listed in the following table may be marked under names for which trademark protection has been sought or obtained in one or more countries. The three first columns of the table hereunder do not intend to include such trademarks. References to known trademarks have been included in the fourth column for information only.

Legend:

M = miniature variety

R = russet variety

V = watercore

* = mutant without varietal protection but linked to a registered/protected trademark; mutants not marked with the asterisk are protected varieties

Varieties	Mutant	Synonyms	Trademarks	Colour Group	Additional Specifications
African Red			African Carmine™	B	
Akane		Tohoku 3 Primerouge		B	
Alkmene		Early Windsor		C	
Alwa				B	
Amasya				B	
Ambrosia			Ambrosia®	B	
Annurca				B	
Ariane			Les Naturianes®	B	
Arlet		Swiss Gourmet		B	R
AW 106			Sapora®	C	
Belgica				B	
Belle de Boskoop		Schone van Boskoop Goudreinette		D	R
	Boskoop rouge	Red Boskoop Roter Boskoop Rode Boskoop		B	R
	Boskoop Valasrid			B	R
Berlepsch		Freiherr von Berlepsch		C	
	Berlepsch rouge	Red Berlepsch, Roter Berlepsch		B	

Varieties	Mutant	Synonyms	Trademarks	Colour Group	Additional Specifications
Breaburn				B	
	Hidala		Hillwell ®	A	
	Joburn		Aurora™ Red Braeburn™ Southern Rose™	A	
	Lochbuie Red Braeburn			A	
	Mahana Red Braeburn		Redfield ®	A	
	Mariri Red		Eve™ Aporo ®	A	
	Royal Braeburn			A	
Bramley's Seedling		Bramley Triomphe de Kiel		D	
Cardinal				B	
Caudle			Cameo ® Camela ®	B	
	Cauflight		Cameo ® Camela ®	A	
CIV323			Isaaq ®	B	
CIVG198			Modi ®	A	
Civni			Rubens ®	B	
Collina				C	
Coop 38			Goldrush ® Delisdor ®	D	R
Coop 39			Crimson Crisp ®	A	
Coop 43			Juliet ®	B	
Coromandel Red		Corodel		A	
Cortland				B	
Cox's Orange Pippin		Cox orange Cox's O.P.		C	R
Cripps Pink			Pink Lady ® Flavour Rose ®	C	
	Lady in Red		Pink Lady ®	B	
	Rosy Glow		Pink Lady ®	B	
	Ruby Pink			B	
Cripps Red			Sundowner™ Joya ®	B	
Dalinbel			Antares ®	B	R
Delblush			Tentation ®	D	
Delcorf			Delbarestivale ®	C	
	Celeste			B	
	Bruggers Festivale		Sissired ®	A	
	Dalili		Ambassy ®	A	
	Wonik*		Appache ®	A	
Delcoros			Autento ®	A	
Delgollune			Delbard Jubilé ®	B	
Delicious ordinaire		Ordinary Delicious		B	
Discovery				C	
Dykmanns Zoet				C	
Egremont Russet				D	R
Elise		De Roblos, Red Delight		A	

Varieties	Mutant	Synonyms	Trademarks	Colour Group	Additional Specifications
Elstar				C	
	Bel-EI		Red Elswout ®	C	
	Daliest		Elista ®	C	
	Daliter		Elton™	C	
	Elshof			C	
	Elstar Boerekamp		Excellent Star ®	C	
	Elstar Palm		Elstar PCP ®	C	
	Goedhof		Elnica ®	C	
	Red Elstar			C	
	RNA9842		Red Flame ®	C	
	Valstar			C	
Vermuel		Elrosa ®	C		
Empire				A	
Fiesta		Red Pippin		C	
Fresco			Wellant ®	B	R
Fuji				B	V
	Aztec		Fuji Zhen ®	A	V
	Brak		Fuji Kiku ® 8	B	V
	Fuji Fubrax		Fuji Kiku ® Fubrax	B	V
	Fuji Supreme			A	V
	Heisei Fuji		Beni Shogun ®	A	V
	Raku-Raku			B	V
Gala				C	
	Baigent		Brookfield ®	A	
	Bigigalaprim		Early Gala Red ®	B	
	Fengal		Gala Venus	A	
	Gala Schnico		Schniga ®	A	
	Gala Schnico Red		Schniga ®	A	
	Galaval			A	
	Galaxy		Selekta ®	B	
	Gilmac		Neon ®	A	
	Imperial Gala			B	
	Jugula			B	
	Mitchgla		Mondial Gala ®	B	
	Natali Gala			B	
	Regal Prince		Gala Must ®	B	
	Royal Beaut			A	
Simmons		Buckeye ® Gala	A		
Gloster				B	
Golden 972				D	
Golden Delicious		Golden		D	
	CG10 Yellow Delicious		Smothee ®	D	
	Golden Delicious Reinders		Reinders ®	D	
	Golden Parsi		Da Rosa ®	D	
	Leratess		Pink Gold ®	D	
	Quemoni		Rosagold ®	D	

Varieties	Mutant	Synonyms	Trademarks	Colour Group	Additional Specifications
Goldstar			Rezista Gold Granny®	D	
Gradigold			Golden Supreme™ Golden Extreme™	D	
Gradiyel			Goldkiss ®	D	
Granny Smith				D	
	Dalivair		Challenger ®	D	
Gravensteiner		Gravenstein		D	
Hokuto				C	
Holsteiner Cox		Holstein		C	R
Honeycrisp			Honeycrunch ®	C	
Horneburger				D	
Idared				B	
	Idaredest			B	
	Najdared			B	
Ingrid Marie				B	R
James Grieve				D	
Jonagold				C	
	Early Jonagold		Milenga ®	C	
	Dalyrian			C	
	Decosta			C	
	Jonagold Boerekamp		Early Queen ®	C	
	Jonagold Novajo	Veulemanns		C	
	Jonagored		Morren's Jonagored ®	C	
	Jonagored Supra		Morren's Jonagored ® Supra ®	C	
	Red Jonaprince		Wilton's ® Red Prince ®	C	
	Rubinstar			C	
	Schneica	Jonica		C	
	Vivista			C	
Jonathan				B	
Karmijn de Sonnaville				C	R
La Flamboyante			Mairac ®	B	
Laxton's Superb				C	R
Ligol				B	
Lobo				B	
Lurefresh			Redlove ® Era ®	A	
Lureprec			Redlove ® Circe ®	A	
Luregust			Redlove ® Calypso ®	A	
Luresweet			Redlove ® Odysso ®	A	
Maigold				B	
Maribelle			Lola ®	B	

Varieties	Mutant	Synonyms	Trademarks	Colour Group	Additional Specifications
McIntosh				B	
Melrose				C	
Milwa			Diwa ® Junami ®	B	
Moonglo				C	
Morgenduft		Imperatore		B	
Mountain Cove			Ginger Gold™	D	
Mutsu		Crispin		D	
Newton				C	
Nicogreen			Greenstar ®	D	
Nicoter			Kanzi ®	B	
Northern Spy				C	
Ohrin		Orin		D	
Paula Red				B	
Pinova			Corail ®	C	
	RoHo 3615		Evelina ®	B	
Piros				C	
Plumac			Koru ®	B	
Prem A153			Lemonade ® Honeymoon ®	C	
Prem A17			Smitten ®	C	
Prem A280			Sweetie™	B	
Prem A96			Rockit	B	M
Rafzubin			RubINETTE ®	C	
	Rafzubex		RubINETTE ® Rosso	A	
Rajka			Rezista Romelike ®	B	
Red Delicious		Rouge américaine		A	
	Campsur		Red Chief ®	A	
	Erovan		Early Red One ®	A	
	Evasni		Scarlet Spur ®	A	
	Stark Delicious			A	
	Starking			C	
	Starkrimson			A	
	Starkspur			A	
	Topred			A	
Trumdor			Oregon Spur Delicious ®	A	
Reine des Reinettes		Gold Parmoné Goldparmäne		C	V
Reinette grise du Canada		Graue Kanadarenette Renetta Canada		D	R
Rome Beauty		Belle de Rome, Rome Sport		B	
Rubin				C	
Rubinola				B	

Varieties	Mutant	Synonyms	Trademarks	Colour Group	Additional Specifications
Šampion		Shampion Champion Szampion		B	
	Reno 2			A	
	Šampion Arno	Szampion Arno		A	
Santana				B	
Sciearly			Pacific Beauty ®	A	
Scifresh			Jazz™	B	
Sciglo			Southern Snap ®	A	
Scilate			Envy ®	B	
Sciray		GS48		A	
Scired			Pacific Queen ®	A	R
Sciros			Pacific Rose ®	A	
Senshu				C	
Spartan				A	
Stayman				B	
Summerred				B	
Sunrise				A	
Sunset				D	R
Suntan				D	R
Sweet Caroline				C	
Topaz				B	
Tydemán's Early Worcester		Tydemán's Early		B	
Tsugaru				C	
UEB32642			Opal ®	D	
Worcester Pearmain				B	
York				B	
Zari				B	