

**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.

**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, with the exception of Fuji and their mutants,
- 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 (e.g. 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 variety<sup>1</sup> and with the stalk which must be intact.

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

- 3/4 of total surface red coloured in case of colour group A,
- 1/2 of total surface mixed red coloured in case of colour group B,
- 1/3 of total surface slightly red coloured, blushed or striped in case of colour group C.

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:

- very slight skin defects,
- very slight russeting<sup>2</sup> such as:
  - brown patches that may not go outside the stem cavity and may not be rough and/or
  - slight isolated traces of russeting.

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

<sup>2</sup> Varieties marked with 'R' in the appendix to this standard are exempt from the provisions on russeting.

## **(ii) Class I**

Apples in this class must be of good quality. They must be characteristic of the variety<sup>3</sup>.

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

- 1/2 of total surface red coloured in case of colour group A,
- 1/3 of total surface mixed red coloured in case of colour group B,
- 1/10 of total surface slightly red coloured, blushed or striped in case of colour group C.

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 cm<sup>2</sup> 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,
  - 1 cm<sup>2</sup> of 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,
- slight russeting<sup>4</sup> 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 1/5 of the total fruit surface and not contrasting strongly with the general colouring of the fruit and/or

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

<sup>4</sup> Varieties marked with 'R' in the appendix to this standard are exempt from the provisions on russeting.

- dense russeting not exceeding 1/20 of the total fruit surface, while thin net-like russeting and dense russeting taken together may not exceed a maximum of 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 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> of 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;
- slight russeting<sup>5</sup> 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 1/2 of the total fruit surface and not contrasting strongly with the general colouring of the fruit and/or
  - dense russeting not exceeding 1/3 of the total fruit surface while
  - thin net-like russeting and dense russeting taken together may not exceed a maximum of 1/2 of the total surface of the fruit.

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<sup>5</sup> Varieties marked with 'R' in the appendix to this standard are exempt from the provisions on russeting.

### 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 level 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 loose in the package or sales packages. However, for apples of the varieties Bramley's Seedling (Bramley, Triomphe de Kiel) and Horneburger, the difference in diameter may amount to 20 mm, or

(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 loose in the package or in sales packages:

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

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

## **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 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.

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

## **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 package must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside.

### **A. Identification**

The name and the address of the packer and/or the dispatcher.

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);
- 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 can be replaced by a synonym. The name of the mutant or a trade name<sup>6</sup> can only be given in addition to the variety or the synonym.

### **C. Origin of produce**

Country of origin<sup>7</sup> 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 weight;
- (b) 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, if 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.

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<sup>6</sup> A trade name can be a trade mark for which protection has been sought or obtained or any other commercial denomination.

<sup>7</sup> 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.

Varieties	Mutant	Synonyms	Colour Group	Russetting
African Red			B	
Akane		Tohoku 3, Primerouge	B	
Alborz Seedling			C	
Aldas			B	
Alice			B	
Alkmene		Early Windsor	C	
Alro			B	
Alwa			B	
Amasya			B	
Angold			C	
Antej		Antei	B	
Apollo		Beauty of Blackmoor	C	
Arkcharm		Arkansas No 18, A 18	C	
Arlet			B	R
Aroma			C	
	Mutants of Aroma e.g.		C	
	Amorosa		C	
Auksis			B	
Beacon			A	
Belfort		Pella	B	
Belle de Boskoop				R
	Mutants of Belle de Boskoop e.g.			R
	Boskoop Rouge	Red Boskoop Roter Boskoop		R
Belle fleur double				
Belorusskoje Malinovoje		Belorusskoe Malinovoe, Byelorusskoe Malinovoe	B	
Berlepsch		Freiherr von Berlepsch	C	
	Mutants of Berlepsch e.g.		C	
	Berlepsch rouge	Red Berlepsch, Roter Berlepsch	C	
Blushed Golden				
Bogatir		Bogatyr		
Bohemia			B	
Braeburn			B	
	Mutants of Braeburn e.g.		B	
	Hidala		B	
	Joburn		B	
	Lochbuie Red Braeburn		B	
	Mahana Red		B	
	Mariri Red		B	
	Redfield		B	
Royal Braeburn		B		
Bramley's Seedling		Bramley, Triomphe de Kiel		
Brettacher Sämling				
Calville Groupe des				
Cardinal			B	
Carola		Kalco	C	
Caudle			B	

Varieties	Mutant	Synonyms	Colour Group	Russeting
Charden				
Charles Ross				
Civni			B	
Coop 38				
Coromandel Red		Corodel	A	
Cortland			B	
Cox's Orange Pippin		Cox Orange	C	R
	Mutants of Cox's Orange Pippin e.g.		C	R
	Cherry Cox		C	R
Crimson Bramley				
Cripps Pink			C	
	Mutants of Cripps Pink e.g.		C	
	Pink Rose		C	
	Rosy Glow		C	
	Ruby Pink		C	
Cripps Red			C <sup>8</sup>	
Dalinbel			B	R
Delblush				
Delcorf			C	
	Mutants of Delcorf e.g.		C	
	Dalili		C	
	Monidel		C	
Delgollune			B	
Delicious ordinaire		Ordinary Delicious	B	
Deljeni				
Delikates			B	
Delor			C	
Discovery			C	
Doč Melbi		Doch Melbi	C	
Dunn's Seedling				R
Dykmanns Zoet			C	
Egremont Russet				R
Elan				
Elise		Red Delight	A	
Ellison's orange		Ellison	C	
Elstar			C	
	Mutants of Elstar e.g.		C	
	Bel-El		C	
	Daliest		C	
	Daliter		C	
	Elshof		C	
	Elstar Armhold		C	
	Elstar Reinhardt		C	
	Goedhof		C	
	Red Elstar		C	
Valstar		C		
Empire			A	
Falstaff			C	
Fiesta		Red Pippin	C	
Florina			B	
Forele			B	
Fortune				R
Fuji			B	
	Mutants of Fuji e.g.		B	

<sup>8</sup> With minimum of 20% red in Class I and Class II.

Varieties	Mutant	Synonyms	Colour Group	Russeting
	Fuji Brak		B	
Gala			C	
	Mutants of Gala e.g.		C	
	Annaglo		C	
	Baigent		C	
	Galaxy		C	
	Mitchgala		C	
	Obrogala		C	
	Regala		C	
	Regal Prince		C	
	Tenroy		C	
Garcia				
Gloster			B	
Goldbohemia				
Golden Delicious				
	Mutants of Golden Delicious			
Golden Russet				R
Golden Supreme		Gradigold, Golden Extreme		
Goldrush		Coop 38		
Goldstar				
Granny Smith				
Gravensteiner		Gravenstein		
	Mutants of Gravensteiner e.g.			
	Gravenstein rouge	Red Gravenstein Roter Gravensteiner		
Greensleeves				
Holsteiner Cox		Holstein		R
	Mutants of Holstein Cox e.g.			R
	Holstein rouge	Red Holstein, Roter Holsteiner Cox		R
Honeycrisp			C	
Honeygold				
Horneburger				
Howgate Wonder		Manga		
Idared			B	
ledzēnu			B	
Ilga			B	
Ingrid Marie			B	R
Iron			C	
Isbranica		Izbranica	C	
Jacob Fisher				
Jacques Lebel				
Jamba			C	
James Grieve				
	Mutant of James Grieve e.g.			
	James Grieve rouge	Red James Grieve		
Jarka			C	
Jerseymac			B	
Jester				
Jonagold			C	
	Mutants of Jonagold e.g.		C	
	Crowngold		C	
	Daligo		C	
	Daliguy	Jonasty	C	

Varieties	Mutant	Synonyms	Colour Group	Russeting
	Dalijejan	Jonamel	C	
	Decosta		C	
	Jomar		C	
	Jomured	Van de Poel	C	
	Jonabel		C	
	Jonabres		C	
	Jonagold 2000	Excel	C	
	Jonagold Boerekamp		C	
	Jonagored Supra		C	
	Jonaveld		C	
	King Jonagold		C	
	New Jonagold	Fukushima	C	
	Novajo	Veulemanns	C	
	Primo		C	
	Red Jonaprince		C	
	Romagold	Surkijn	C	
	Rubinstar		C	
	Schneica	Jonica	C	
	Wilmuta		C	
Jonalord			C	
Jonathan			B	
Julia			B	
Jupiter				
Karmijn de Sonnaville			C	R
Katja		Katy	B	
Kent				R
Kidd's orange red			C	R
Kim			B	
Koit			C	
Koričnoje Novoje		Korichnoe Novoe, Korichnevoe Novoe	C	
Kovalenkovskoje		Kovalenkovskoe	B	
Krameri Tuvioun			B	
Kukikovskoje			B	
Lady Williams			B	
Lane's Prince Albert				
Laxton's Superb			C	R
Ligol			B	
Lobo			B	
Lodel			A	
Lord Lambourne			C	
Maigold			B	
McIntosh			B	
Meelis			B	
Melba			C	
Melodie			B	
Melrose			C	
Meridian			C	
Moonglo			C	
Morgenduft		Imperatore	B	
Mountain Cove				
Mutsu		Crispin		
Noris			B	
Normanda			C	
Nueva Europa			C	
Nueva Orleans			B	
Odin			B	

Varieties	Mutant	Synonyms	Colour Group	Russeting
Ontario			B	
Orlik			B	
Orlovskoje Polosatoje			C	
Ozark Gold				
Paula Red			B	
Pero de Cirio				
Piglos			B	
Pikant			B	
Pikkolo			C	
Pilot			C	
Pimona			C	
Pinova			C	
Pirella			B	
Piros			C	
Prima			B	
Rafzubin			C	
	Mutants of Rafzubin e.g. Rafzubex		C C	
Rajka			B	
Rambour d'hiver				
Rambour Franc			B	
Reanda			B	
Rebella			C	
Red Delicious			A	
	Mutants of Red Delicious e.g. Campsur Erovan Fortuna Delicious Otago Red King Red Spur Red York Richared Royal Red Shotwell Delicious Stark Delicious Starking Starkrimson Starkspur Topred Trumdor Well Spur		A A A A A A A A A A A A A A A A A A A	
Red Dougherty			A	
Redkroft			A	
Regal			A	
Regina			B	
Reglindis			C	
Reine des Reinettes		Goldparmäne, Gold Parmoné	C	
Reineta Encarnada			B	
Reinette Rouge du Canada			B	
Reinette d'Orléans				
Reinette Blanche du Canada		Reinette du Canada, Canada Blanc, Kanadarenette, Renetta del Canada		R

Varieties	Mutant	Synonyms	Colour Group	Russeting
Reinette de France				
Reinette de Landsberg				
Reinette grise du Canada		Graue Kanadarenette		R
Relinda			C	
Remo			B	
Renora			B	
Resi			B	
Resista				
Retina			B	
Rewena			B	
Roja de Benejama		Verruga, Roja del Valle, Clavelina	A	
Rome Beauty		Belle de Rome, Rome	B	
	Mutants of Rome Beauty e.g.		B	
	Red Rome		B	
Rosana			B	
Royal Beauty			A	
Rubin (Czech cultivar)			C	
Rubin (Kazakhstan cultivar)			B	
Rubinola			B	
Rudens Svītrainsis		Osennee Polosatov, Rudeninis Dryzuotasis, Rudens Svītrotais, Streifling, Streifling Herbst, Sūgisjoonik, Syysjuovikas and numerous others	C	
Saltanat			B	
Sciearly			A	
Scifresh			B	
Sciglo			A	
Sciray		GS48	A	
Scired			A	R
Sciros			A	
Selena			B	
Shampion			B	
Sidrunkollane Talioun				
Sinap Orlovskij				
Snygold		Earlygold		
Sommerregent			C	
Spartan			A	
Splendour			A	
St.Edmunds Pippin				R
Stark's Earliest			C	
Staris		Staris	A	
Sturmer Pippin				R
Summerred			B	
Sūgisdessert			C	
Sunrise			A	
Sunset				R
Suntan				R
Sweet Caroline			C	
Talvenauding			B	R

<b>Varieties</b>	<b>Mutant</b>	<b>Synonyms</b>	<b>Colour Group</b>	<b>Russeting</b>
Tellisaare			B	
Tiina		Tina	C	
Topaz			B	
Tydeman's Early Worcester		Tydeman's Early	B	
Veteran			B	
Vista Bella		Bellavista	B	
Wealthy			B	
Worcester Pearmain			B	
York			B	
Zailijskoje		Zailiyskoe	B	
Zigulovskoje		Zhigulovskoe	C	