

**UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE**

**UNECE STANDARD FFV-46**

concerning the marketing and  
commercial quality control of

**KIWIFRUIT**

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## NOTE

### **The Working Party on Agricultural Quality Standards**

The commercial quality standards of the UNECE Working Party on Agricultural Quality Standards help facilitate international trade, encourage high-quality production, improve profitability and protect consumer interests. UNECE standards are used by Governments, producers, traders, importers and exporters, and other international organizations, and cover a wide range of agricultural products, including fresh fruit and vegetables, dry and dried produce, seed potatoes, meat, cut flowers, eggs and egg products. For more information on UNECE agricultural standards, please visit our website <[www.unece.org/trade/agr](http://www.unece.org/trade/agr)>.

The present text of this Standard for Kiwifruit is based on document TRADE/WP.7/GE.1/2004/25/Add.3. Amendments to the Standard were introduced in January 2008 to reflect the revisions in the Standard Layout as recommended in ECE/TRADE/C/WP.7/2007/4.

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**UNECE STANDARD FFV-46**  
concerning the marketing and commercial quality control of

**KIWIFRUIT**

**I. DEFINITION OF PRODUCE**

This Standard applies to kiwifruit (also known as *actinidia* or *kiwis*) of varieties (cultivars) grown from *Actinidia chinensis Planch* and *Actinidia deliciosa* (A. Chev., C.F. Liang and A.R. Ferguson) to be supplied fresh to the consumer, kiwifruit for industrial processing being excluded.

**II. PROVISIONS CONCERNING QUALITY**

The purpose of the Standard is to define the quality requirements of kiwifruit, at the export-control stage, after preparation and packaging.

However, if applied at stages following export, product 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 kiwifruit must be:

- intact (but free of peduncle)
- 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
- adequately firm; not soft, shrivelled or water-soaked
- well formed, double/multiple fruit being excluded
- free of abnormal external moisture
- free of any foreign smell and/or taste.

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

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

### **B. Minimum maturity requirements**

The kiwifruit must be sufficiently developed and display satisfactory ripeness.

In order to satisfy this requirement, the fruit at packing must have attained a degree of ripeness of at least 6.2° Brix or an average dry matter content of 15% which should lead to 9.5° Brix when entering the distribution chain.

### **C. Classification**

Kiwifruit are classified in three classes defined below:

(i) ***"Extra" Class***

Kiwifruit in this class must be of superior quality. They must be well developed and have all the characteristics and the colouring typical of the variety.

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.

The ratio of the minimum/maximum diameter of the fruit measured at the equatorial section must be 0.8 or greater.

(ii) ***Class I***

Kiwifruit in this class must be of good quality. They must be characteristic of the variety.

They must be firm and 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 (but free of swelling or malformations)
- slight defects in colouring
- slight skin defects, provided the total area affected does not exceed 1 cm<sup>2</sup>
- small "Hayward mark" like longitudinal lines and without protuberance.

The ratio of the minimum/maximum diameter of the fruit measured at the equatorial section must be 0.7 or greater.

(iii) ***Class II***

This class includes kiwifruit which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified above.

The fruit must be reasonably firm and the flesh should not show any serious defects.

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

- defects in shape
- defects in colouring
- skin defects such as small healed cuts or scarred/grazed tissue, provided that the total area affected does not exceed 2 cm<sup>2</sup>
- several more pronounced "Hayward marks" with a slight protuberance
- slight bruising.

### **III. PROVISIONS CONCERNING SIZING**

Size is determined by the weight of the fruit.

The minimum weight for "Extra" Class is 90 g, for Class I is 70 g and for Class II is 65g.

The difference in weight between the largest and the smallest fruit in each package must not exceed:

- 10 g for fruit of weight up to 85 g
- 15 g for fruit weighing between 85 g and 120 g
- 20 g for fruit weighing between 120 g and 150 g
- 40 g for fruit weighing 150 g or more.

### **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 kiwifruit 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 kiwifruit 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 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 kiwifruit 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 kiwifruit not satisfying the requirements as regards the minimum weight and/or the size range specified is allowed.

However, the fruit must be of a size immediately below or above the size indicated or, in the case of the smallest size, they must not weigh less than 85 g in "Extra" Class, 67 g in Class I and, 62 g in Class II.

**V. PROVISIONS CONCERNING PRESENTATION**

**A. Uniformity**

The contents of each package must be uniform and contain only kiwifruit of the same origin, variety, quality and size.

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

**B. Packaging**

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

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>1</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       )     a code mark officially recognized by the national authority.<sup>2</sup>

### **B. Nature of produce**

- "Kiwifruit" and/or "Actinidia" if the contents are not visible from the outside
- Name of the variety (optional).

### **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 by the minimum and maximum weight of the fruit
- Number of fruits (optional).

### **E. Official control mark (optional)**

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<sup>1</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>2</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.