
UNECE STANDARD FFV-46

concerning the marketing and
commercial quality control of

KIWIFRUIT

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NOTE

Working Party on Agricultural Quality Standards

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This revised Standard for Kiwifruit is based on document ECE/CTCS/WP.7/2023/10 reviewed and adopted by the Working Party at its seventy-eighth session.

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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 kiwi) 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 for kiwifruit after preparation and packaging.

However, if applied at stages following export/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 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/seller 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 it:

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

B. 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 per cent, which should lead to 9.5° Brix when entering the distribution chain.

C. Classification

Kiwifruit is classified in three classes, as defined below:

(i) “Extra” Class

Kiwifruit in this class must be of superior quality. It must be characteristic of the variety.

The fruit must be firm and the flesh must be perfectly sound.

It 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. It must be characteristic of the variety.

The fruit 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 cm²
- 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 that does not qualify for inclusion in the higher classes but satisfies 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 retains its essential characteristics as regards the quality, the keeping quality and presentation:

- 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 cm²
- 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 65 g.

To ensure uniformity in size, the range in size between produce in the same package shall 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

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.¹

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

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 sizing is allowed.

However, the kiwifruit 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.

¹ A conformity check shall be made by assessing primary or composite samples. It is based on the principle of presumption that the quality of the randomly taken samples is representative of the quality of the lot. The OECD Operating Rules for Conformity Checks are recommended for application – also by operators – at the stages of dispatch as well as in wholesale and distribution centres and storerooms of food retail.

However, a mixture of kiwifruit of distinctly different flesh colours may be packed together in a sales package, provided they are uniform in quality and, for each flesh colour concerned, in origin.

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 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 package² must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

A. Identification

Packer and/or dispatcher/exporter:

Name and physical address (e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority³ if the country applying such a system is listed in the UNECE Code Mark Registry⁴. In the case where there is no street address available, the physical address can be made up of the name of the farm or facility, the nearest village, town, region, and postal code; or GPS coordinates and a PO Box address together with nearest town, region and country shall be accepted as a physical address.⁵

B. Nature of produce

- “Kiwifruit” and/or “Actinidia” if the contents are not visible from the outside
- Name of the variety (optional)
- Flesh colour or equivalent indication, if not green
- In the case of a mixture of kiwifruit of distinctly different flesh colours, the colours of the different kiwifruit.

² These marking provisions do not apply to sales packages presented in packages bearing these particulars. However, they do apply to sales packages (pre-packages) presented individually.

³ 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-2) country/area code of the recognizing country, if not the country of origin.

⁴ See <http://www.unece.org/trade/agr/codemarkregistry.html>.

⁵ Reservation by the United States of America on the use of a PO Box address, as it may not allow facility inspections or rapid intervention in case of recalls, and is not part of its national labelling requirement related to packer and/or dispatcher/exporter.

C. Origin of produce

- Country of origin⁶ and, optionally, district where grown, or national, regional or local place name
- In the case of a mixture of distinctly different flesh colours of kiwifruit of different origins, the indication of each country of origin shall appear next to the name of the flesh colour concerned.

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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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.

⁶ The full or a commonly used name should be indicated.