
UNECE STANDARD FFV-37

concerning the marketing and
commercial quality control of

WATERMELONS

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NOTE

Working Party on Agricultural Quality Standards

The commercial quality standards developed by the Working Party on Agricultural Quality Standards of the United Nations Economic Commission for Europe (UNECE) 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. They 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.

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The present revised Standard for Watermelons is based on document ECE/CTCS/WP.7/2021/21, reviewed and adopted by the Working Party in 2021 (followed by a silence procedure in line with the special procedures during the COVID-19 period).

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Please contact us at the following address with any comments or enquiries:

Agricultural Standards Unit
Economic Cooperation and Trade Division
United Nations Economic Commission for Europe
Palais des Nations
CH-1211 Geneva 10, Switzerland

UNECE standard FFV-37 concerning the marketing and commercial quality control of watermelons

I. Definition of produce

This standard applies to watermelons of varieties (cultivars) grown from *Citrullus lanatus* (Thunb.) Matsum. et Nakai to be supplied fresh to the consumer, watermelons for industrial processing being excluded.

II. Provisions concerning quality

The purpose of the standard is to define the quality requirements for watermelons 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 watermelons 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 watermelons 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 watermelons must be sufficiently developed and display satisfactory maturity and/or ripeness. The colour and taste of the flesh should conform to a sufficient state of ripeness.

In order to satisfy this requirement, the refractometric index of the flesh measured at the middle point of the fruit flesh at the equatorial section must be equal to or greater than 8° Brix.

C. Classification

The watermelons are classified in three classes, as defined below:

(i) “Extra” Class

Watermelons in this class must be of superior quality. They must be characteristic of the variety.

The stem of the watermelon must not exceed 5 cm in length.

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.

A pale colouring of the watermelon which has been in contact with the ground during the period of growth is not regarded as a defect.

(ii) Class I

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

The stem of the watermelon must not exceed 5 cm in length.

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 colouring of the rind; a pale colouring of the watermelon which has been in contact with the ground during the period of growth is not regarded as a defect
- slight healed superficial cracks
- slight skin defects, of which the total area affected must not exceed one sixteenth of the surface of the fruit.

(iii) Class II

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

- defects in shape
- defects in colouring of the rind; a pale colouring of the watermelon which has been in contact with the ground during the period of growth is not regarded as a defect
- healed superficial cracks
- skin defects, of which the total area affected must not exceed one eighth of the surface of the fruit
- slight bruising.

III. Provisions concerning sizing

Size is determined by the weight per unit.

To ensure uniformity in size, the range in size between produce in the same package shall not exceed 2 kg or 3.5 kg if the lightest unit exceeds 6 kg.

This uniformity in weight is not compulsory for watermelons presented in bulk in pallet boxes/bins or in the transport vehicle.

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 watermelons 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 watermelons 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 watermelons satisfying neither the requirements of the class nor the minimum requirements are 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 (if sized): a total tolerance of 10 per cent, by number or weight, of watermelons not satisfying the requirements as regards sizing is allowed.

V. Provisions concerning presentation

A. Uniformity

The contents of each package (or lot for produce presented in bulk in the transport vehicle) must be uniform and contain only watermelons of the same origin, variety, quality and size (if sized).

In addition, in Classes “Extra” and I, the shape and colour of the rind of the watermelons must be uniform.

The visible part of the contents of the package (or lot for produce presented in bulk in the transport vehicle) must be representative of the entire contents.

B. Packaging

The watermelons 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

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 application of the OECD Operating Rules for Conformity Checks is recommended for application – also by operators – at the stages of dispatch as well as in wholesale and distribution centres and storerooms of food retail. <http://www.oecd.org/agriculture/fruit-vegetables/publications/oecd-fruit-and-vegetables-rules.htm>.

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. Information lasered on single fruit should not lead to flesh or skin defects.

Packages (or lots for produce presented in bulk in the transport vehicle) must be free of all foreign matter. Watermelons transported in bulk in the transport vehicle must be separated from the floor and walls of the vehicles by a suitable protective material, which must be clean and not liable to transfer any abnormal taste or smell to the fruit.

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.

For watermelons transported in bulk (direct loading into a transport vehicle) these particulars must appear on a document accompanying the goods, and attached in a visible position inside the transport vehicle. For this type of presentation, the indication of the size is not compulsory.

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 database.

B. Nature of produce

- “Watermelons” if the contents are not visible from the outside
- Name of the variety (optional)
- Colour of flesh if not red
- “Seedless”, where appropriate.⁴

C. Origin of produce

- Country of origin⁵ and, optionally, district where grown, or national, regional or local place name.

D. Commercial specifications

- Class
- Size (if sized) expressed as minimum and maximum weights

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 Seedless watermelons may contain underdeveloped seeds and occasional developed seeds.

⁵ The full or a commonly used name should be indicated.

- Number of units (optional).

E. Official control mark (optional)

Adopted 1964

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Aligned with the Standard Layout 2021

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.
