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# **UNECE STANDARD FFV-42**

concerning the marketing and  
commercial quality control of

## **AVOCADOS**

**2023 EDITION**



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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.

Any member of the United Nations can participate, on an equal footing, in the activities of the Working Party. For more information on agricultural standards, please visit our website <http://www.unece.org/trade/agr/welcome.html>.

The present revised Standard for Avocados is based on document ECE/CTCS/WP.7/2019/8, reviewed and adopted by the Working Party at its seventy-fifth session.

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# UNECE standard FFV-42 concerning the marketing and commercial quality control of avocados

## I. Definition of produce

This standard applies to avocados of varieties (cultivars) grown from *Persea americana* Mill. to be supplied fresh to the consumer, parthenocarpic fruit and avocados for industrial processing being excluded.

## II. Provisions concerning quality

The purpose of the standard is to define the quality requirements for avocados 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 avocados 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 damage caused by low temperature
- having a stalk not more than 10 mm in length which must be cut off cleanly. However, its absence is not considered a defect on condition that the place of the stalk attachment is dry and intact
- free of abnormal external moisture
- free of any foreign smell and/or taste<sup>1</sup>.

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

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

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<sup>1</sup> The use of preserving agents or any other chemical substance liable to leave a foreign smell on the skin of the fruit is permitted where it is compatible with the regulations of the importing country.

## **B. Maturity requirements**

The development and state of maturity of the avocados must be such as to enable them to continue their ripening process and to reach a satisfactory degree of ripeness.

The fruit should have a minimum dry matter content, to be measured by drying to constant weight:

- 21 per cent for the variety Hass
- 20 per cent for the varieties Fuerte, Pinkerton, Reed and Edranol
- 19 per cent for the other varieties except for Antillian varieties that may show a lower dry matter content.

The ripe fruit should be free from bitterness.

## **C. Classification**

Avocados are classified in three classes, as defined below:

### **(i) “Extra” Class**

Avocados in this class must be of superior quality. They must be characteristic 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. If present, the stalk must be intact.

### **(ii) Class I**

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

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
- slight defects in colouring
- slight skin defects (corkiness, healed lenticels) and sunburn, provided they are not progressive; the maximum total area should not exceed 4 cm<sup>2</sup>.

In no case may the defects affect the fruit flesh.

The stalk, if present, may be slightly damaged.

### **(iii) Class II**

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

- defects in shape
- defects in colouring
- skin defects (corkiness, healed lenticels) and sunburn, provided they are not progressive; the maximum total area should not exceed 6 cm<sup>2</sup>.

In no case may the defects affect the fruit flesh.

The stalk, if present, may be damaged.

### III. Provisions concerning sizing

Size is determined by the weight or count of the fruit.

To ensure uniformity in size between produce in the same package, the following provisions should be applied:

(a) For Antillean varieties

The weight of the smallest fruit shall be not less than 75 percent of the weight of the largest fruit in the same package.

(b) For other varieties the following size scale applies:

<i>Size code</i>	<i>Weight range (g)</i>
4	781 to 1220
6	576 to 780
8	456 to 576
10	364 to 462
12	300 to 371
14	258 to 313
16	227 to 274
18	203 to 243
20	184 to 217
22	165 to 196
24	151 to 175
26	144 to 157
28	134 to 147
30	123 to 137
S*	Less than 123

\* The difference between the smallest and largest fruit within a package should not be more than 25 g.

### 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 for the class indicated.<sup>2</sup>

#### A. Quality tolerances

(i) “Extra” Class

A total tolerance of 5 per cent, by number or weight, of avocados not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not

<sup>2</sup> 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.

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 avocados 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 avocados 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 avocados not satisfying the requirements as regards sizing is allowed.

**V. Provisions concerning presentation**

**A. Uniformity**

The contents of each package must be uniform and contain only avocados of the same origin, variety, quality, colouring<sup>3</sup> and size.

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

**B. Packaging**

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

Packages must be free of all foreign matter.

**VI. Provisions concerning marking**

Each package<sup>4</sup> must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

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<sup>3</sup> A change in the colour of the dark-skinned varieties is not considered as a defect, but the colouring of the fruit in each package must be uniform at the point of dispatch.

<sup>4</sup> 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.

## 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 authority<sup>5</sup> if the country applying such a system is listed in the UNECE Code Mark Registry<sup>6</sup>. 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.<sup>7</sup>

## B. Nature of produce

- “Avocados” if the contents are not visible from the outside
- “Antillean/Florida” or equivalent denomination, where appropriate
- Name of the variety.

## C. Origin of produce

- Country of origin<sup>8</sup> and, optionally, district where grown, or national, regional or local place name.

## D. Commercial specifications

- Class
- Size expressed as
  - Minimum and maximum weights or
  - Count or
  - Code number of the size scale and number of fruits when it is different from code number or
  - Code number of the size scale and the net weight of the package or
  - In case of sales packages (pre-packages): net weight. However, in the case of products sold by number, the requirement to indicate the net weight shall not apply if the number of items may be clearly seen and easily counted from the outside or, if the number is indicated on the label.

## E. Official control mark (optional)

<sup>5</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-2) country/area code of the recognizing country, if not the country of origin.

<sup>6</sup> See <http://www.unece.org/trade/agr/codemarkregistry.html>.

<sup>7</sup> 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.

<sup>8</sup> The full or a commonly used name should be indicated.

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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](http://www.oecdbookshop.org).

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