

UNECE STANDARD FFV-10
concerning the marketing and commercial
quality control of

CARROTS
moving in international trade between and to
UNECE member countries

I. DEFINITION OF PRODUCE

This standard applies to carrots of varieties (cultivars) grown from *Daucus carota L.* to be supplied fresh to the consumer, carrots for industrial processing being excluded.

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements of carrots at the export control stage, after preparation and packaging.

A. Minimum requirements

In all classes, subject to the special provisions for each class and the tolerances allowed, the carrots must be:

- intact
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- clean, that is to say:
 - practically free of any visible foreign matter, if they are washed
 - practically free of excess dirt and impurities if they are not washed
- practically free from pests
- practically free from damage caused by pests
- firm
- not forked, free of secondary roots
- not woody
- not running to seed
- free of abnormal external moisture i.e. sufficiently dried after washing
- free of any foreign smell and/or taste.

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

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

B. Classification

Carrots are classified in three classes defined below:

(i) **"Extra" Class**

Carrots in this class must be of superior quality and washed. They must be characteristic of the variety or the varietal type.

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 roots must be:

- smooth
- fresh in appearance
- regular in shape
- free of fissures
- free of bruises and cracks
- free of damage due to frost.

Green or violet/purple tops are not allowed.

(ii) **Class I**

Carrots in this class must be of good quality. They must be characteristic of the variety or the varietal type.

The roots must be:

- fresh in appearance.

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:

- slight defects in shape
- slight defects in colouring
- slight healed cracks
- slight cracks or fissures due to handling or washing.

Green or violet/purple tops up to 1 cm long for roots not exceeding 10 cm in length, and up to 2 cm for other roots, are allowed.

(iii) **Class II**

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

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

- defects in shape and in colouring
- healed cracks not reaching the heart
- cracks or fissures due to handling or washing.

Green or violet/purple tops up to 2 cm long for roots not exceeding 10 cm in length, and up to 3 cm for other roots, are allowed.

III. PROVISIONS CONCERNING SIZING

Size is determined by the maximum diameter or the weight of the root when without foliage.

- (i) Early carrots¹ and small root varieties

Roots must not be less than 10 mm when sizing is by diameter and not less than 8 g when sizing is by weight.

Roots must not be more than 40 mm when sizing is by diameter and not more than 150 g when sizing is by weight.

- (ii) Main-crop carrots and large root varieties

Roots must not be less than 20 mm when sizing is by diameter and not less than 50 g when sizing is by weight.

Roots classified in the "Extra" Class must not be more than 45 mm when sizing is by diameter and not more than 200 g when sizing is by weight and the difference in diameter or in weight between the smallest and the largest root in any one package must not be more than 20 mm or 150 g.

For roots classified in Class I, the difference in diameter or weight between the smallest and the largest root in any one package must not be more than 30 mm or 200 g.

For roots classified in Class II, the roots need only satisfy the minimum sizing requirements.

IV. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package, or in each lot for produce presented in bulk, for produce not satisfying the requirements of the class indicated.

A. Quality tolerances

- (i) *"Extra" Class*

5 per cent by weight of carrots not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

5 per cent by weight of carrots having a slight trace of green or violet/purple colouring at the top.

¹ Roots in which growth has not been arrested.

(ii) ***Class I***

10 per cent by weight of carrots not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class. However, broken carrots and/or carrots which have lost their tips are excluded from that tolerance.

10 per cent by weight of broken carrots and/or carrots which have lost their tips.

(iii) ***Class II***

10 per cent by weight of carrots satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

In addition, not more than 25 per cent by weight of broken carrots may be allowed.

B. Size tolerances

For all classes: 10 per cent by weight of carrots not satisfying the requirements as regards sizing.

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

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

The visible part of the contents of the package, or lot for produce presented in bulk, must be representative of the entire contents.

B. Packaging

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

The materials used inside the package must be new, 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.

Packages, or lots for produce presented in bulk, must be free of all foreign matter.

C. Presentation

Carrots may be presented:

(i) **bunched carrots**

The roots must be presented with their foliage, which must be fresh, green and sound. Roots in the same bunch should be practically uniform in size. The bunches in each package should be practically uniform in weight and arranged evenly in one or more layers.

- (ii) topped carrots
The foliage must be evened off or cut off at the top of the root without damaging it.

The carrots may be presented:

- in small packages
- arranged in several layers or jumble packed
- in bulk (direct loading into a transport vehicle or vehicle compartment) for Class II.

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 carrots transported in bulk (direct loading into a transport vehicle or vehicle compartment), these particulars must appear on a document accompanying the goods, and be attached in a visible position inside the transport vehicle.

A. Identification

Packer)	Name and address or
and/or)	officially issued or
Dispatcher)	accepted code mark. ³

B. Nature of produce

- "Bunched carrots" or "carrots") if the contents are not visible
- "Early carrots" or "main-crop carrots") from the outside
- Name of the variety or the varietal type for "Extra" Class.

C. Origin of produce

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

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.

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.

D. Commercial specifications

- Class
- Size expressed in minimum and maximum diameter or weight (optional)
- Number of bunches in the case of bunched carrots.

E. Official control mark (optional)

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The UNECE Standard for Carrots
has led to an explanatory brochure published by the OECD Scheme