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Specialized Section on Standardization of Fresh Fruit and Vegetables

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NEW UNECE STANDARDS

Carrots and other Root Vegetables

This document, submitted by Germany, contains draft text for a new UNECE standard for carrots and other root vegetables.

UNECE STANDARD FFV-No
concerning the marketing and commercial quality control of

CARROTS AND OTHER ROOT VEGETABLES

I. DEFINITION OF PRODUCE

This standard applies to root vegetables of varieties (cultivars) grown from the following species to be supplied fresh to the consumer, root vegetables for industrial processing being excluded:

- carrots (*Daucus carota* L. ssp. *sativus* (Hoffm.) Schübl. et G. Martens),
- parsnips (*Pastinaca sativa* L.),
- Hamburg parsley (*Petroselinum crispum* (Mill.) Nyman ex A. W. Hill var. *tuberosum* (Bernh.) Mart Crov.),
- turnip-rooted chervil or bulbous chervil (*Chaerophyllum bulbosum* L.),
- salsify (*Tragopogon porrifolius* L. ssp. *porrifolius*),
- scorzonera (*Scorzonera hispanica* L.),
- horse-radish (*Armoracia rusticana* Gottfr. Gaertn., B. Mey. et Scherb.).

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements for root vegetables at the export-control stage after preparation and packaging.

However, if applied at stages following export, products may show in relation to the requirements of the standard:

- a slight lack of freshness and turgidity
- 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 root vegetables must be:

- intact;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- clean, this means for
 - o practically free of any visible foreign matter, in case of washed roots
 - o practically free of serious dirt and impurities, in case of un-washed roots

- free of attached earth in case of scorzoneras
- practically free from pests
- free from damage caused by pests affecting the flesh
- fresh in appearance and firm
- not forked
- free of secondary root growth
- not running to seed
- not woody
- free of abnormal external moisture, i.e. sufficiently dried after washing
- free of any foreign smell and/or taste.

Washed carrots may be covered with peat.

Carrots and Hamburg parsley may be presented with leaves. In this case, the leaves must be sound, fresh and clean.

In case of root vegetables presented without leaves, the leaves must be neatly cut at the top of the root.

Horse-radish, parsnips and Hamburg parsley are presented without root tip. In case of horse-radish, the side roots must be cut neatly at the main root.

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

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

B. Classification

Root vegetables are classified in two classes, as defined below:

(i) Class I

Root vegetables in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

The roots must be well formed and not forked.

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 superficial defects and damages
- slight healed cracks
- slight cracks due to washing and handling in case of carrots

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

(ii) Class II

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

- defects in shape
- defects in colouring
- superficial defects and damages
- healed cracks not reaching the core
- one fork
- cracks due to washing and handling in case of carrots.

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

III. PROVISIONS CONCERNING SIZING

The size is determined by the maximum diameter of the equatorial section, the length or the weight of the root.

Sizing is mandatory for Class I carrots and scorzonera only.

i) Carrots (without foliage)

The difference in diameter or weight between the smallest and the largest root in any one package must not exceed 20 mm or 150 g.

ii) Scorzonera

The difference in diameter or length between the smallest and the largest root in any one package must not exceed 20 mm in diameter or 5 cm in length.

iii) All root vegetables

In case of roots presented in bundles, the number of roots per bundle must be equal in the package.

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) Class I

A total tolerance of 10 per cent, by number or weight, of root vegetables 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 quality nor the minimum requirements. Produce affected by rotting or any other deterioration rendering it unfit for consumption is excluded.

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

(ii) Class II

A total tolerance of 10 per cent, by number or weight, of root vegetables 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.

In addition, not more than 25 per cent by weight of broken carrots and/or roots which have lost their tips.

B. Size tolerances

For all classes: A total tolerance of 10 per cent, by number or weight, of root vegetables 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 root vegetables of the same origin, variety or commercial type, quality and size (if sized).

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

B. Packaging

Root vegetables 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.

Packages must be free of all foreign matter.

Where washed carrots are covered with pure peat, the peat used shall not be considered as foreign matter. In case of scorzoneras, loose sand in the package is not regarded as foreign matter.

VI. PROVISIONS CONCERNING MARKING

Each package¹ 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/shipper) a code mark officially recognized by the national authority².

B. Nature of produce

- "Carrots", "Parsnips", "Hamburg parsley", "Turnip-rooted chervil", "Salsify", "Scorzonera", "Horse-raddish", if the contents are not visible from the outside;
- "with leaves" or "without leaves", where appropriate and if the contents are not visible from the outside;
- "carrots with peat", where appropriate;

C. Origin of produce

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

D. Commercial specifications

- Class

¹ 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".

² 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.

- size (if sized) expressed as minimum and maximum size in mm (diameter), cm (length) or g (weight), (optional);
- number of bundles or sales packages, where appropriate and if the contents are not visible from the outside.

E. Official control mark (optional)