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Crops
Inspection
Division

United States Standards for Grades of Topped Carrots

Effective July 24, 2020

This issue of the United States Standards for Grades of Topped Carrots (85 FR 37820) supersedes the previous issue which has been in effect since December 20, 1965.

Voluntary U.S. grade standards are issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. These grade standards are available for use by producers, suppliers, buyers, and consumers. As in the case of other standards for grades of fresh and processed fruits, vegetables, and specialty crops these standards are designed to facilitate orderly marketing by providing a convenient basis for buying and selling, for establishing quality control programs, and for determining loan values.

The U.S. grade standards and inspection instructions for all fresh and processed fruits, vegetables, and specialty crops are available on the internet and upon request at the address below. These documents provide detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issued by the U.S. Department of Agriculture (USDA) after careful consideration of all data and views submitted during rulemaking. The Department welcomes suggestions for improving the standards in future revisions. Comments may be submitted to, and copies of standards and inspection instructions obtained from:

Director, Specialty Crops Inspection Division
Specialty Crops Program,
USDA, Agricultural Marketing Service
1400 Independence Avenue, SW, STOP 0240
Washington, D.C. 20250

Authority: 7 U.S.C. 1621-1627.

Note: Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

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United States Standards for Grades of Topped Carrots

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Grades

§51.2360 U.S. Extra No. 1.

“**U.S. Extra No. 1**” consists of carrots of similar varietal characteristics which are well trimmed, firm, clean, fairly well colored, fairly smooth, well formed; which are free from secondary new top growth and soft rot, and free from damage caused by freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or other means. (See §51.2365.)

- (a) **Size.** The diameter of each carrot is not less than 3/4 inch or more than 1-1/2 inches, and the length is not less than 5 inches. (See §51.2365.)

§51.2361 U.S. No. 1.

“**U.S. No. 1**” consists of carrots of similar varietal characteristics which are well trimmed, firm, fairly clean, fairly well colored, fairly smooth, fairly well formed; which are free from soft rot, and free from damage caused by freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or other means. (See §51.2365.)

- (a) **Size.** Unless otherwise specified, the diameter of each carrot is not less than 3/4 inch or more than 1-1/2 inches, and the length is not less than 5 inches. (See §51.2365.)

§51.2362 U.S. No. 1 Jumbo.

“**U.S. No. 1 Jumbo**” consists of carrots which meet all requirements of the U.S. No. 1 grade except for size. (See §51.2365.)

- (a) **Size.** The diameter of each carrot is not less than 1 inch or more than 2-1/2 inches, and the length is not less than 5 inches. (See §51.2365.)

§51.2363 U.S. No. 1 Color and U.S. No. 1 Jumbo Color.

“**U.S. No. 1 Color**” or “**U.S. No. 1 Jumbo Color**” consists of carrots which meet the requirements of the U.S. No. 1 or U.S. No. 1 Jumbo grades except for fairly well colored. All roots must show good characteristic color, which means the root has a uniform characteristic color for the variety over practically the entire surface. Roots may be comingled with varieties of different colors, provided roots are of the same type. (See §51.2365.)

§51.2364 U.S. No. 2.

“**U.S. No. 2**” consists of carrots of similar varietal characteristics which are well trimmed, firm, not excessively rough, not seriously misshapen; which are free from soft rot, and free from serious damage caused by dirt, freezing, growth cracks, sunburn,

pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or other means. (See §51.2365.)

- (a) **Size.** Unless otherwise specified, the diameter of each carrot is not less than 1 inch or more than 3 inches, and the length is not less than 3 inches. (See §51.2365.)

Tolerances

§51.2365 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by count, are provided as specified:

(a) **Defects.**

- (1) **U.S. Extra No. 1 grade.** Ten percent for carrots in any lot which fail to meet the requirements of this grade: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than 1 percent for carrots affected by soft rot.
- (2) **U.S. No. 1, U.S. No. 1 Jumbo, U.S. No. 1 Color, and U.S. No. 1 Jumbo Color grades.** Ten percent for carrots in any lot which fail to meet the requirements of the grade: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than 2 percent for carrots affected by soft rot.
- (3) **U.S. No. 2 grade.** Ten percent for carrots which fail to meet the requirements of this grade, including therein not more than 2 percent for carrots affected by soft rot.

(b) **Off-size.**

- (1) Five percent for carrots in any lot which are larger than the specified maximum diameter; and
- (2) Ten percent for carrots in any lot which are smaller than the specified minimum diameter or shorter than the specified minimum length.

Application of Tolerances

§51.2366 Application of tolerances.

Individual samples shall not have more than double the tolerance specified: *Provided*, That not more than one carrot which is frozen or affected by soft rot may be permitted in any package weighing approximately 3 pounds or less: *And provided further*, That the averages for the entire lot are within the tolerances specified for the grade.

Sample for Grade Determination

§51.2367 Sample for grade determination.

Each sample shall consist of 50 carrots. When individual packages contain at least 50 carrots, the sample is drawn from one package; when individual packages contain less than 50 carrots, a sufficient number of adjoining packages are opened to form a 50 carrot sample.

Standard Sizing

§51.2368 Standard sizing.

- (a) Packages of carrots containing 2 pounds or less may be certified as “standard sizing,” provided the variation in diameter of the carrots in any individual package is not more than three-eighths inch and the variation in length is not more than 2-1/2 inches.
- (b) Not more than 10 percent of the packages in any lot may fail to meet the requirements for “standard sizing.”

Definitions

§51.2369 Similar varietal characteristics.

“**Similar varietal characteristics**” means that the carrots in any lot are of the same general type. For example, carrots with a short, but blunt growth like the Oxheart variety, shall not be mixed with long or half-long carrots like the Emperor or Danvers varieties.

§51.2370 Well trimmed.

“**Well trimmed**” means that the tops are cut back to not more than 1 inch in length, except that new leaves developing within the original central cluster of leafstems, or occasional uncut leaves or leafstems, exceeding this length which do not materially affect the appearance of the individual carrot shall be permitted. Carrots may have tips of roots cut or broken off: *Provided*, That these cuts or breaks are small and fairly smooth and do not materially affect the appearance of the individual carrot.

§51.2371 Firm.

“**Firm**” means that the carrot is not soft, flabby, or shriveled.

§51.2372 Clean.

“**Clean**” means that the individual carrot is practically free from dirt and other foreign matter.

§51.2373 Fairly well colored.

“**Fairly well colored**” means that the carrot has an orange, orange red, or orange scarlet color, but not a pale orange or distinct yellow color.

§51.2374 Fairly smooth.

“**Fairly smooth**” means that the individual carrot is not rough, ridged, or covered with secondary rootlets to the extent that the appearance is materially affected.

§51.2375 Well formed.

“**Well formed**” means that the individual carrot is not forked, or misshapen to the extent that the appearance is more than slightly affected.

§51.2376 Secondary new top growth.

“**Secondary new top growth**” means new leaves or clusters of leaves which have developed outside the original central cluster of leafstems.

§51.2377 Damage.

“**Damage**” means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or shipping quality of the individual carrot or the appearance of the sample as a whole, or which cannot be removed without a loss of more than 5 percent, by weight, in the ordinary preparation for use. The following specific defects shall be considered as damage:

- (a) **Growth cracks** which are not shallow or not smooth, or which materially detract from the appearance of the individual carrot;
- (b) **Sunburn** which causes a loss of more than 5 percent, by weight, in the ordinary preparation for use, except that superficial light green color at the stem end which does not materially detract from the appearance of the carrot shall be permitted.

§51.2378 Diameter.

“**Diameter**” means the greatest dimension of the carrot measured at right angles to the longitudinal axis.

§51.2379 Length.

“**Length**” means the greatest dimension of the carrot measured from the crown to the lowest point which is not less than one-fourth inch in diameter.

§51.2380 Fairly clean.

“**Fairly clean**” means that the individual carrot is reasonably free from dirt and other foreign matter.

§51.2381 Fairly well formed.

“**Fairly well formed**” means that the individual carrot is not forked, or misshapen to the extent that the appearance is materially affected.

§51.2382 Excessively rough.

“**Excessively rough**” means that the individual carrot is rough or ridged to the extent that the appearance is seriously affected.

§51.2383 Seriously misshapen.

“**Seriously misshapen**” means that the individual carrot is forked or misshapen to the extent that the appearance is seriously affected.

§51.2384 Serious damage.

“**Serious damage**” means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or shipping quality of the individual carrot or the appearance of the sample as a whole, or which cannot be removed without a loss of more than 20 percent, by weight, in the ordinary preparation for use.

Conversion Table

Inches	=	Millimeters (mm)
1/8	=	3.2
1/4	=	6.4
3/8	=	9.5
1/2	=	12.7
5/8	=	15.9
3/4	=	19.0
7/8	=	22.2
1	=	25.4
1-1/4	=	31.8
1-1/2	=	38.1
1-3/4	=	44.4
2	=	50.8
3	=	76.2
4	=	101.6