



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Programs**

**Fresh
Products
Branch**

United States Standards for Grades of Tomatoes on the Vine

Effective January 17, 2008

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General

§51.2165 General.

These standards shall apply to all types of tomatoes on the vine except for cherry type tomatoes and grape type tomatoes.

Grades

§51.2166 U.S. No. 1.

"U.S. No. 1" consists of tomatoes on the vine of similar varietal characteristics (except when marked as mixed type or mixed variety), which are mature but not overripe or soft, clean, fairly well formed; which are free from decay, sunscald, and freezing injury, and free from damage caused by bruises, cuts, shriveling, puffiness, catfaces, growth cracks, scars, disease, insects, or other means (See §51.2167.). The tomatoes shall be attached to stems/vines. The vines shall not be brittle and shall be free from decay; and free from damage by mold or other means.

§51.2167 U.S. No. 2.

"U.S. No. 2" consists of tomatoes on the vine of similar varietal characteristics (except when marked as mixed type or mixed variety), which are mature but not overripe or soft, clean,

¹Compliance 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.

reasonably well formed; which are free from decay, sunscald, and freezing injury, and free from serious damage caused by cuts, shriveling, puffiness, catfaces, growth cracks, scars, disease, insects, or other means (See §51.2167.). The tomatoes shall be attached to stems/vines. The vines shall not be brittle and shall be free from decay; and free from serious damage by mold or other means.

Tolerances

§51.2168 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. No. 1 grade.** (i) Tomatoes. Not more than 10 percent of the tomatoes in any lot may fail to meet the requirements of the grade, but not more than one-half of this amount, or 5 percent, shall be allowed for serious damage, including in this latter amount not more than 2 percent for tomatoes which are soft or affected by decay. In addition, not more than 10 percent of the tomatoes in any lot may be detached from the stem/vine.

(ii) Vines. Not more than 10 percent of the vines may fail to meet the requirements of the grade, but not more than one-half of this amount, or 5 percent, shall be allowed for decayed stems/vines.

(2) **U.S. No. 2 grade.** (i) Tomatoes. Not more than 10 percent of the tomatoes in any lot may fail to meet the requirements of the grade, including not more than 2 percent for tomatoes which are soft or affected by decay. In addition, not more than 10 percent of the tomatoes in any lot may be detached from the stem/vine.

(ii) Vines. Not more than 10 percent of the vines may fail to meet the requirements of the grade, but not more than one-half of this amount, or 5 percent, shall be allowed for decayed stems/vines. (b) **Offsize.** 15 percent of the tomatoes in any lot may vary from the specified diameter, including therein not more than 5 percent for tomatoes which fail to meet any specified minimum diameter.

Application of Tolerances

§51.2169 Application of tolerances.

The contents of individual packages in the lot are subject to the following limitations:

(a) For a tolerance of 10 percent or more, individual packages shall have not more than one and one-half times the tolerance specified: **Provided**, That when the package contains 15 specimens or less, any individual package shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package: **And provided further**, That the averages for the entire lot are within the tolerances specified for the grade.

(b) For a tolerance of less than 10 percent, individual packages in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package: **Provided**, That the averages for the entire lot are within the tolerances specified for the grade.

Size Classification

§51.2170 Size classification.

The size of tomatoes may be specified by count or weight per container or specified to a minimum and/or maximum diameter.

Minimum diameter: Will not pass through a round opening of the designated diameter when tomato is placed with the greatest transverse diameter across the opening.

Maximum diameter: Will pass through a round opening of the designated diameter in any position.

Definitions

§51.2171 Similar varietal characteristics.

"Similar varietal characteristics" means that the tomatoes are of the same characteristic shape and color (bright red varieties shall not be mixed with varieties having a purplish tinge).

§51.2172 Mature.

"Mature" means that the contents of two or more seed cavities have developed a jellylike consistency and the seeds are well developed. External color shows at least a definite break from green to tannish-yellow, pink or red color on not less than 10 percent of the surface.

§51.2173 Soft.

"Soft" means that the tomato yields readily to slight pressure.

§51.2174 Clean.

"Clean" means that the individual tomato is practically free from dirt and other foreign matter.

§51.2175 Fairly well formed.

"Fairly well formed" means that the tomato is not more than slightly kidney-shaped, lopsided, elongated, angular, or otherwise slightly deformed from the characteristic shape of the variety.

§51.2176 Reasonably well formed.

"Reasonably well formed" means that the tomato is not more than moderately kidney-shaped, lopsided, elongated, angular, or otherwise moderately deformed from the characteristic shape of the variety.

§51.2177 Tomatoes on the vine.

"Tomatoes on the vine" means two or more tomatoes attached to the same vine.

§51.2178 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 marketing quality of the tomato. References to area, aggregate area, length, or aggregate length are based on a tomato having a diameter of 2-1/2 inches in diameter. The following specific defects shall be considered as damage:

- (a) Puffiness when the open space in one or more seed cavities materially detracts from the appearance of the tomato when cut through the center at right angles to a line running from the stem to the blossom end;
- (b) Catfaces when scars are rough or deep, when channels are very deep or wide, when channels extend into a seed cavity, or a fairly smooth catface aggregating more than an area of a circle one-half inch in diameter.
- (c) Growth cracks (radiating from or concentric to the stem scar) when not well healed, when more than one-eighth inch in depth, or any individual radial crack one-half inch in length, or having more than a 1 inch aggregate length of all radial cracks measured from the edge of the stem scar;
- (d) Scars (other than catfaces) no depth and aggregating more than an area of a circle three-eighths inch in diameter; and,
- (e) Cuts, not well healed, not shallow, or a cut more than one-half inch in length.

§51.2179 Serious damage.

"Serious 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 seriously detracts from the appearance or the edible or marketing quality of the tomato.

References to area, aggregate area, length, or aggregate length are based on a tomato having a diameter of 2-1/2 inches in diameter. The following specific defects shall be considered as serious damage:

- (a) Puffiness when the open space in one or more seed cavities seriously detracts from the appearance of the tomato when cut through the center at right angles to a line running from the stem to the blossom end;
- (b) Catfaces when scars are rough or deep, when channels are very deep or wide, when channels extend into a seed cavity, or a fairly smooth catface aggregating more than an area of a circle 1 inch in diameter.
- (c) Growth cracks (radiating from or concentric to the stem scar) when not well healed, when more than one-eighth inch in depth, or any individual radial crack three-fourth inch in length, or having more than a 1-1/2 inch aggregate length of all radial cracks measured from the edge of the stem scar;
- (d) Scars (other than catfaces) no depth and aggregating more than an area of a circle 1 inch in diameter; and,
- (e) Cuts, not well healed, not shallow, or a cut more than one-half inch in length.

§51.2180 Metric conversion table.

Metric Conversion Table

| Inches | Millimeters (mm) |
|-------------------|---------------------|
| 1/8 equals..... | 3.2 |
| 1/4 equals..... | 6.4 |
| 3/6 equals..... | 9.5 |
| 1/2 equals..... | 12.7 |
| 5/8 equals..... | 15.9 |
| 3/4 equals..... | 19.1 |
| 7/8 equals..... | 22.2 |
| 1 equals..... | 25.4 |
| 1-1/4 equals..... | 31.8 |
| 1-1/2 equals..... | 38.1 |
| 1-3/4 equals..... | 44.5 |
| 2 equals..... | 50.8 |
| 3 equals..... | 76.2 |
| 4 equals..... | 101.6 |