



**United States  
Department of  
Agriculture**

**Agricultural  
Marketing  
Service**

**Fruit and  
Vegetable  
Programs**

**Fresh  
Products  
Branch**

# **United States Standards for Grades of Greenhouse Tomatoes**

**Effective March 19, 2007**

# United States Standards for Grades of Greenhouse Tomatoes <sup>1</sup>

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## **Grades**

### **§51.3345 U.S. No. 1.**

“U.S. No. 1” consists of tomatoes of similar varietal characteristics 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, moldy stems, skin checks, or other means. (See §51.3348.)

### **§51.3346 U.S. No. 2.**

“U.S. No. 2” consists of tomatoes of similar varietal characteristics which are mature but not overripe or soft, clean, 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, moldy stems, skin checks, or other means. (See §51.3348.)

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<sup>1</sup>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.

## **Reserved**

### **§51.3347 Reserved.**

## **Tolerances**

### **§51.3348 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. 1 grade.** Ten 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 1 percent for tomatoes which are soft or affected by decay.

(2) **U.S. No. 2 grade.** Ten percent of the tomatoes in any lot may fail to meet the requirements of the grade, but not more than one-tenth of this amount or 1 percent shall be allowed for tomatoes which are soft or affected by decay.

(b) **Off-size.** Fifteen percent of the tomatoes in any lot may vary from the specified size, including therein not more than 5 percent for tomatoes which fail to meet any specified minimum size.

## **Application of Tolerances**

### **§51.3349 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**

### **§51.3350 Size classification.**

The size of tomatoes may be specified by count per container, net weight per container, or in accordance with one of the following classifications:

(a) "Small" 2-4/32 to 2-9/32;

(b) "Medium" 2-8/32 to 2-17/32;

(c) "Large" 2-16/32 to 2-25/32; and,

(d) "Extra Large" 2-24/32 and larger.

**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.

## **Standard Pack**

### **§51.3351 Standard pack.**

Tomatoes shall be fairly uniform in size when packed to marked count.

(a) “Fairly uniform in size” means that not more than 10 percent, by count, of the tomatoes in any container may vary more than 1/2 inch in diameter.

## **Definitions**

### **§51.3352 Similar varietal characteristics.**

“Similar varietal characteristics” means that the tomatoes are alike as to character of color (bright red varieties shall not be mixed with varieties having a purplish tinge).

### **§51.3353 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.

### **§51.3354 Soft.**

“Soft” means that the tomato yields readily to slight pressure.

### **§51.3355 Clean.**

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

### **§51.3356 Fairly well formed.**

“Fairly well formed” means that the tomato is not more than slightly kidney-shaped, lopsided, elongated, angular, or otherwise slightly deformed.

### **§51.3357 Reasonably well formed.**

“Reasonably well formed” means that the tomato is not more than moderately kidney-shaped, lopsided, elongated, angular, or otherwise moderately deformed.

### **§51.3358 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 locules 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 locule, or a fairly smooth catface aggregating more than 1/2 inch in diameter, based on a tomato 2-1/2 inches in diameter.

(c) Growth cracks (radiating from or concentric to the stem scar) when not well healed, when more than 1/8 inch in depth, or when affecting the appearance or marketing quality of the tomato to a greater extent than that of a tomato 2-1/2 inches in diameter having any individual radial crack 1/2 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) when the appearance of the tomato is affected to a greater extent than that of a tomato 2-1/2 inches in diameter having scar with no depth which has an area equivalent to that of a circle 3/8 inch in diameter; and,

(e) Cuts, not well healed, not shallow, or which affect the appearance or marketing quality of the tomato to a greater extent than that of a tomato 2-1/2 inches in diameter having a cut 1/2 inch in length.

(f) Skin checks when the appearance of the tomato is affected to a greater extent than that of a tomato 2-1/2 inches in diameter having skin checks which has an aggregate area equivalent to that of a circle 3/8 inch in diameter.

**§51.3359 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 locules 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 channels extend into the locule, when the wall has been weakened to the extent that slight pressure will cause the tomato to leak, or when the appearance of the tomato is affected to a greater extent than that of a tomato 2-1/2 inches in diameter having a fairly smooth catface with an area equivalent to that 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 1/8 inch in depth, or when affecting the appearance or marketing quality of the tomato to a greater extent than that of a tomato 2-1/2 inches in diameter having individual radial cracks 3/4 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) when the appearance of the tomato is affected to a greater extent than that of a tomato 2-1/2 inches in diameter having a scar with no depth which has an area equivalent to that of a circle 1 inch in diameter; and,

(e) Cuts, not well healed, not shallow, or which affect the appearance or marketing quality of the tomato to a greater extent than that of a tomato 2-1/2 inches in diameter having a cut 1/2 inch in length.

(f) Skin checks when the appearance of the tomato is affected to a greater extent than that of a tomato 2-1/2 inches in diameter having skin checks which has an aggregate area equivalent to that of a circle 5/8 inch in diameter.

**§51.3360 Metric conversion table.**

**Metric Conversion Table**

| Inches          | Millimeters<br>(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 |