



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Fresh
Products
Branch**

United States Standards for Grades of Tomato Plants

Effective January 3, 1944
(Reprinted - January 1997)

United States Standards for Grades of Tomato Plants ¹

Grade

51.4505 U.S. No. 1.

Tolerances

51.4506 Tolerances.

Standards for Bunching

51.4507 Standards for bunching.

Standards for Packing

51.4508 Standards for packing.

Unclassified

51.4509 Unclassified.

Definitions

51.4510 Similar varietal characteristics.

51.4511 Fairly fresh.

51.4512 Strong.

51.4513 Unbroken.

51.4514 Fairly straight.

51.4515 Firm.

51.4516 Soft.

51.4517 Woody.

51.4518 Leafy.

51.4519 Normal color.

51.4520 Damage.

51.4521 Freezing.

51.4522 Heating.

51.4523 Diameter.

51.4524 The length of the stem.

51.4525 Length of the main tap root.

Grade

§51.4505 U.S. No. 1.

"U.S. No. 1" consists of tomato plants of similar varietal characteristics which are fairly fresh, strong, and unbroken. The stems shall be fairly straight, firm, but not soft, or woody. The tops shall be leafy, and of normal color. The length of the main tap root shall be not less than 1-3/4 inches.

(a) The plants shall be free from decay, early blight (*Alternaria solani*), and bacterial canker (*Phytopomonas michiganensis*), and from damage caused by other diseases, freezing, heating,

¹Packing of the product in conformity with the requirements 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.

foreign material, insects, mechanical or other means.

(b) Unless otherwise specified, the diameter of the stem of each plant shall be not less than 3/16 inch and the length of the stem shall be not less than 6 inches nor more than 9 inches. (See §51.4506.)

Tolerances

§51.4506 Tolerances.

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

(a) **For defects.** Ten percent for tomato plants in any lot which fail to meet the requirements of this grade: **Provided**, That no tolerance shall be allowed for decay, early blight (*Alternaria solani*), or bacterial canker (*Phytomonas michiganensis*).

(b) **For size.** Ten percent for tomato plants in any lot which fail to meet the specified size requirements, including therein not more than 5 percent for plants which are smaller than the specified minimum diameter.

Standards for Bunching

§51.4507 Standards for bunching.

Tomato plants may be packed loose or in bunches. When bunched, the number of plants per bunch shall average not less than 50 plants in 50-size bunches and not less than 100 plants in 100-size bunches.

Standards for Packing

§51.4508 Standards for packing.

The plants in individual bunches shall be arranged with the tops of the roots in approximately the same plane and the roots shall be protected by an adequate supply of moistened peat moss, sphagnum moss, or other suitable packing material with moisture holding capacity, well scattered over the roots in the bunch and held in place with a paper wrap. The bunches shall be packed upright and fairly tightly in containers of sufficient height to accommodate the size of plants packed and in such a manner as to not cause bending or excessive bruising of the plants.

(a) In order to allow for variations incident to proper packing not more than 10 percent of the containers in any lot may fail to meet the packing requirements.

Unclassified

§51.4509 Unclassified.

"Unclassified" consists of tomato plants which have not been classified in accordance with the foregoing grade. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

Definitions

§51.4510 Similar varietal characteristics.

"Similar varietal characteristics" means that the plants have the same general character of growth and color.

§51.4511 Fairly fresh.

"Fairly fresh" means that the stems, roots and foliage are not excessively wilted, limp, or flabby.

§51.4512 Strong.

"Strong" means that the stem is fairly stiff and sturdy enough to hold the top in a reasonably erect position.

§51.4513 Unbroken.

"Unbroken" means that the stem and that portion of the main tap root remaining on the plant after pulling are not broken.

§51.4514 Fairly straight.

"Fairly straight" means that the stem is not more than moderately curved or crooked.

§51.4515 Firm.

"Firm" means that the stem about midway between the growing tip and the base does not yield more than slightly to moderate pressure of the fingers.

§51.4516 Soft.

"Soft" means that the stem about midway between the growing tip and the base yields more than slightly to moderate pressure of the fingers.

§51.4517 Woody.

"Woody" means that the stem is excessively hard and fibrous.

§51.4518 Leafy.

"Leafy" means that the leaves of the plant are of normal development and not small and underdeveloped.

§51.4519 Normal color.

"Normal color" means that the plant shows a healthy green color.

§51.4520 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the normal growth, shipping quality, or general appearance of the plant.

§51.4521 Freezing.

"Freezing" means injury to the plant caused by excessively low temperatures.

§51.4522 Heating.

"Heating" means injury to the plant caused by excessively high temperatures.

§51.4523 Diameter.

"Diameter" means the greatest thickness of the stem measured at the first internode above the cotyledons.

§51.4524 The length of the stem.

"The length of the stem" means the distance from the top of the underground root system to the growing tip of the plant.

§51.4525 Length of the main tap root.

"Length of the main tap root" means the distance from the top of the underground root system to the end of the largest central root.