



**United States
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Agriculture**

**Agricultural
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Service**

**Fruit and
Vegetable
Division**

**Fresh
Products
Branch**

United States Standards for Grades of Onions for Processing

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United States Standards for Grades of Onions for Processing ¹

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General

§51.4190 General.

(a) The accompanying grades for onions are intended to facilitate transactions between growers and processors who may wish to use a purchasing system based upon the quality of onions delivered. These grades are an outgrowth of the widely accepted principle that price should be directly proportional to quality. The grower who delivers high quality onions deserves a premium price because such onions enable the processor to pack a better quality finished product.

(b) In the application of these standards it is assumed that in most instances sellers will not sort their onions into separate lots of U.S. No. 1 and U.S. No. 2 grades before delivery to the buyer, and that the buyer will pay a certain price for the percentage of each grade in the lot as determined by inspection. Upon delivery, the inspector will simply sort representative samples taken from each lot, and determine the percentage of each grade. Final settlement would then be made by applying the percentage of each grade to the total weight of the lot, and then applying the contract prices established for each grade. Under such a procedure, there is no need for

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.

tolerances.

(c) It will be noted, however, that the standards provide tolerances but these apply only when a grower or shipper has actually sorted his onions into separate lots of U.S. No. 1 or U.S. No. 2 grades before delivery to the buyer.

Grades

§51.4191 U.S. No. 1.

"U.S. No. 1" consists of onions of similar varietal characteristics which are mature, fairly firm; free from soft rot or wet breakdown, sprouts, bottlenecks, scallions, and cull material. The onions shall also be free from damage caused by seedstems, sunscald, sunburn, roots, moisture, freezing, mold or other disease, insects, mechanical or other means.

(a) Unless otherwise specified, the minimum size shall be one inch in diameter. (See §§51.4194 and 51.4195.)

§51.4192 U.S. No. 2.

"U.S. No. 2" consists of onions of similar varietal characteristics which are mature, not soft or spongy; free from soft rot or wet breakdown, scallions, and cull material. The onions shall also be free from damage caused by sunscald, sunburn, roots, moisture, freezing, mold or other disease, and insects, and free from serious damage caused by sprouting, and mechanical or other means.

(a) Unless otherwise specified, the minimum size shall be one inch in diameter. (See §§51.4194 and 51.4195.)

Culls

§51.4193 Culls.

"Culls" consist of onions that fail to meet the requirements of either of the foregoing grades and topping requirements.

Topping Requirements

§51.4194 Topping requirements.

Unless otherwise specified, the onions shall be topped in accordance with good commercial practice. In making grade determinations, unless otherwise specified, all onions in excess of 20 percent, by weight, with tops over 3 inches long shall be classed as Culls.

Tolerances

§51.4195 Tolerances.

(a) For the purpose of determining compliance with one of the foregoing grades the following tolerances, by weight, are provided in order to allow for variations incident to proper grading and handling:

(1) **For defects.** Five percent for onions in any lot which fail to meet the requirements of the specified grade, including therein not more than 2 percent for onions which are affected by wet mold, soft rot, soft sunscald or watery breakdown.

(2) **For cull material.** Two percent in any lot.

(3) **For tops.** Twenty percent for onions in any lot which have tops more than 3 inches long.

(4) **For size.** Five percent for onions in any lot which fail to meet the specified minimum diameter and 15 percent for onions which fail to meet the specified maximum diameter.

(b) In the application of these standards to determine the percentages of onions in any lot which meet the requirements of the respective grades or size categories no tolerances apply.

Definitions

§51.4196 Similar varietal characteristics.

"Similar varietal characteristics" means that the onions are of the same color and general type.

§51.4197 Mature.

"Mature" means dry and well cured. Mid-season onions which are not customarily held in storage shall be considered mature when harvested in accordance with good commercial practice at a stage which will not result in the onions becoming soft or spongy.

§51.4198 Fairly firm.

"Fairly firm" means that the onion may yield only slightly to moderate pressure.

§51.4199 Bottlenecks.

"Bottlenecks" are onions having abnormally thick necks with only fairly well developed bulbs.

§51.4200 Scallions.

"Scallions" are onions which have thick necks and relatively small and poorly developed bulbs.

§51.4201 Cull material.

"Cull material" means loose tops, scales, trash, loose dirt, adhering caked dirt or other foreign matter. Onions with adhering caked dirt shall not be scored against U.S. No. 1 or U.S. No. 2 grades, but such dirt shall be removed from the onions and scored as cull material.

§51.4202 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 processing quality of the individual onion. The following specific defects shall be considered as damage:

- (a) Seedstems when more than three-eighths inch in diameter.
- (b) Sunscald, except slight dry scald which is not readily apparent without peeling the onion.
- (c) Sunburn, when the onion shows extensive deep green discoloration.
- (d) Roots, which are succulent and excessively long and bushy.
- (e) Freezing, when the onion shows a lack of firmness, a water-soaked appearance of the flesh, or breakdown.
- (f) Disease, when the onion shows any wet mold, wet breakdown, or decay.
- (g) Mechanical injury, when more than one of the fleshy scales is badly cracked, cut or bruised.

§51.4203 Diameter.

"Diameter" means the greatest dimension at right angles to a straight line running from the stem to the root.

§51.4204 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 processing quality of the individual onion. The following specific defects shall be considered as serious damage:

- (a) Sprouting, when the onion has become soft and spongy.
- (b) Mechanical injury, when more than two of the fleshy scales are badly cracked, cut or bruised.