



**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 Beets for Processing

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United States Standards for Grades of Beets for Processing ¹

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General

§51.4095 General.

(a) The accompanying grades for beets are intended to facilitate transactions between growers and processors who may wish to use a purchasing system based upon the quality of beets 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 beets deserves a premium price because such beets 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 beets 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 and size classification 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 and size classification. Final settlement would then be made by applying the percentage of each grade and size classification to the total weight of the lot, and then applying the contract prices established for

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.

each grade and size classification. Under such a procedure, there is no need for 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 beets in to separate lots of U.S. No. 1 or U.S. No. 2 grades before delivery to the buyer.

Grades

§51.4096 U.S. No. 1.

"U.S. No. 1" consists of beets of similar varietal characteristics, which are firm, tender, fairly well formed; free from soft rot, cull material, and free from damage caused by growth cracks, internal discoloration, white zoning, rodents, freezing, dry rot, other disease, insects, mechanical or other means. (See §51.4099 and §51.4100.)

(a) Unless otherwise specified, beets shall be not less than 1 inch in diameter. Other size or sizes may be specified, subject to agreement between buyer and seller. When such agreements are made, the sizes shall be specified in terms of diameter in inches or by means of one or more of the following size classifications:

(1) **Small.** One inch to not over 2 inches in diameter.

(2) **Medium.** Over 2 inches to not over 3 inches in diameter.

(3) **Large.** Over 3 inches in diameter.

§51.4097 U.S. No. 2.

"U.S. No. 2" consists of beets of similar varietal characteristics which are firm, tender, not badly misshapen; free from soft rot, cull material, and free from damage caused by internal discoloration and white zoning and free from serious damage by any cause. (See §51.4099 and §51.4100.)

(a) Unless otherwise specified, beets shall be not less than 1 inch in diameter.

Culls

§51.4098 Culls.

"Culls" consist of beets which fail to meet the requirements of either of the foregoing grades.

Topping Requirements

§51.4099 Topping requirements.

Unless otherwise specified, tops shall be cut or torn off to within 1 inch of the crown of the root. In making grade determinations, all portions of leaves or leafstems over 1 inch in length, or any other specified length, shall be removed from the roots and scored as "cull material." (See §51.4105.)

Tolerances

§51.4100 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.** Ten percent for beets in any lot which fail to meet the requirements of the specified grade, including therein not more than 1 percent for beets which are affected by soft rot.

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

(3) **For size.** Fifteen percent for beets in any lot which fail to meet the specified size requirements, including therein not more than 5 percent for beets which fail to meet the specified minimum diameter.

(b) In the application of these standards to determine the percentages of beets in any lot which

meet the requirements of the respective grades or size categories no tolerances apply.

Definitions

§51.4101 Firm.

"Firm" means that the beet is not appreciably wilted or flabby.

§51.4102 Tender.

"Tender" means that the edible portion of the beet is not fibrous, woody, or tough.

§51.4103 Fairly well formed.

"Fairly well formed" means that the beet may be somewhat flattened, three-sided or otherwise slightly misshapen, but not sufficiently so as to materially interfere with the normal process of peeling.

§51.4104 Soft rot.

"Soft rot" means any soft, mushy or leaky condition of the tissue.

§51.4105 Cull material.

"Cull material" means pieces of beets, loose tops, and portions of attached tops and sprouts in excess of the specified length, loose dirt, adhering caked dirt, weeds, or other foreign matter. Beets with adhering caked dirt, and tops or sprouts which are longer than the specified length, shall not be scored against U.S. No. 1 or U.S. No. 2 grades, but such dirt and such portions of tops and sprouts, which are longer than the specified length, shall be removed from the roots and scored as "cull material."

§51.4106 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 beet; or when occurring on a beet not over 2 inches in diameter, cannot be removed in the ordinary process of peeling; or when occurring on a beet more than 2 inches in diameter, cannot be removed without a loss of more than 10 percent, by weight, in excess of that which would occur if the beet were perfect. The following specific defects are considered as damage:

- (a) "Internal discoloration" when the beet shows any internal black spot, or other abnormal discoloration which noticeably affects the appearance of the flesh.
- (b) "White zoning" when the cross section of the beet shows zones of distinctly whitish or pinkish white flesh.

§51.4107 Diameter.

"Diameter" mean the shortest distance measured through the center of the beet at right angles to a line running from crown to tip end of the root.

§51.4108 Badly misshapen.

"Badly misshapen" means that the beet is flattened, three-sided, or otherwise misshapen to the extent that, in the ordinary process of trimming, a loss of more than 25 percent, by weight, is incurred in excess of that which would occur if the beet were perfect.

§51.4109 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the processing quality of the beet; or which cannot be removed in the ordinary process of trimming without a loss of more than 25 percent, by weight, in excess of that which would occur if the beet were perfect.