

Inches	Millimeters (mm)
4	101.6

Subpart—United States Standards for Grades of Potatoes for Processing¹

SOURCE: 48 FR 10802, Mar. 15, 1983, unless otherwise noted.

§ 51.3410 Grades.

(a) “U.S. No. 1 Processing” consists of potatoes which meet the following requirements:

- (1) Basic requirements:
 - (i) Similar varietal characteristics;
 - (ii) Moderately firm; and,
 - (iii) Fairly well shaped.
- (2) Free from:
 - (i) Freezing or freezing injury;
 - (ii) Blackheart;
 - (iii) Late Blight Tuber Rot;
 - (iv) Southern Bacterial Wilt;
 - (v) Bacterial Ring Rot;
 - (vi) Insects, worms or larvae;
 - (vii) Soft rot and wet breakdown; and,
 - (viii) Loose sprouts, dirt and foreign material.

- (3) Free from damage by any cause.
- (4) *Size.* Unless otherwise specified, individual potatoes shall be not less than 2 inches in diameter or 4 ounces in weight. Percentage(s) of a larger size(s) and/or a maximum size may be specified.

(b) “U.S. No. 2 Processing” consists of potatoes or usable pieces of potatoes which meet the following requirements:

- (1) Basic requirements:
 - (i) Similar varietal characteristics;
 - (ii) Moderately firm; and,
 - (iii) Not seriously misshapen.
- (2) Free from:
 - (i) Freezing or freezing injury;
 - (ii) Blackheart;
 - (iii) Late Blight Tuber Rot;
 - (iv) Southern Bacterial Wilt;
 - (v) Bacterial Ring Rot;
 - (vi) Insects, worms or larvae;

¹Compliance with the provisions of these standards shall not excuse failure to comply with provisions of applicable Federal or State laws.

(vii) Soft rot and wet breakdown; and,

(viii) Loose sprouts, dirt and foreign material.

(3) Free from serious damage by any cause.

(4) *Size.* Unless otherwise specified, whole potatoes shall be not less than 1½ inches in diameter, or usable pieces shall be not less than 4 ounces in weight. Percentage(s) of a larger size(s) and/or maximum size may be specified.

§ 51.3411 Usable piece.

“Usable Piece” means that portion of the potato remaining after trimming, or as it occurs in the sample:

- (a) Not have any unusable material;
- (b) Unless otherwise specified, weigh at least 4 ounces; and,
- (c) Must have at least 50% of peel remaining after trimming.

§ 51.3412 Unusable material.

“Unusable Material” consists of defective portions of potatoes, and potatoes which are frozen, affected by freezing injury, soft rot, wet breakdown, insects, worms, larvae, Blackheart, Late Blight Tuber Rot, Southern Bacterial Wilt, Bacterial Ring Rot, or which are seriously damaged by internal defects.

§ 51.3413 Size.

(a) The minimum size, maximum size or range in size may be specified in connection with the grade in terms of diameter or weight.

(b) Diameter means the greatest dimension in terms of inches or fractions of an inch measured at right angles to the longitudinal axis, without regard to the position of the stem-end.

(c) Weight means the minimum or maximum weight measured in terms of whole ounces. When a maximum weight is specified, the potato shall not be considered as oversize until it weighs the next higher ounce.

§ 51.3414 Application of standards.

In the application of these standards to determine the percentages of potatoes in any lot which meet the requirements of the respective grades or size categories, tolerances do not apply. However, for lots which are graded or pre-sorted for size or quality, offered for inspection and required to meet one

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of the grades, the following tolerances, by weight, are provided:

(a) For defects:

(1) *U.S. No. 1 Processing*. 10 percent for potatoes which fail to meet the requirements of this grade including not more than one-half of this tolerance, or 5 percent, for serious damage by any means, including therein not more than 2 percent for potatoes which are frozen or affected by soft rot or wet breakdown.

(2) *U.S. No. 2 Processing*. 10 percent for potatoes which fail to meet the requirements of this grade including not more than one-half of this tolerance, or 5 percent, for potatoes which are seriously damaged by internal defects occurring entirely within the vascular ring, including therein not more than 2 percent for potatoes which are frozen or affected by soft rot or wet breakdown.

(b) For loose sprouts, dirt and foreign material: 2 percent.

(c) For off-size:

(1) *Undersize*. 3 percent when the minimum size specified is less than 2¼ inches in diameter or less than 5 ounces in weight; and 5 percent when the minimum size specified is 2¼ inches or more in diameter or 5 ounces or more in weight.

(2) *Oversize*. 10 percent.

§51.3415 Definitions.

Similar varietal characteristics means that the potatoes in any lot have the same general shape, color, and character of skin and color of flesh.

Fairly well shaped means that the potato is not materially pointed, dumb-bell-shaped, or otherwise deformed.²

Moderately firm means that the potato is not seriously shriveled or flabbily.²

²USDA Visual Aid, POT-L 1 Jan 81. This publication may be examined in the Fruit and Vegetable Division, Fresh Products Branch, AMS, U.S. Department of Agriculture, South Building, Washington, DC 20250, or any field office of the Fresh Fruit and Vegetable Inspection Service. Copies of this visual aid may be purchased from the John Henry Company, P.O. Box 17099, Lansing, MI 48901 or United Fresh Fruit and Vegetable Association, N. Washington at Madison, Alexandria, VA 22314.

Not seriously misshapen means that the potato is not seriously deformed and causing more than 10% waste when determining the non-peelable area directly due to shape.

Soft rot or wet breakdown means any soft, mushy or leaky condition of the tissue such as Leak, slimy soft rot, wet type Fusarium Tuber Rot, or wet breakdown following freezing injury or heat injury.

Loose sprouts, dirt and foreign material means unattached sprouts or sprouts that become detached during the grading of the sample, stems, vines, adhering dirt, loose dirt, stones, trash and other extraneous material.

Damage means any defect listed in §51.3416, or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which cannot be removed without a loss of more than 5 percent of the total weight of the potato.

Serious Damage means any defect listed in §51.3416, or an equally objectionable variation of any of these defects, any other defect, or any combination of defects, which cannot be removed without a loss of more than 10 percent of the total weight of the potato.

External Defects are defects which can be detected externally. Cutting may be required to determine the extent of the injury.

Internal Defects are defects which cannot be detected without cutting the potato.

§51.3416 Classification of defects.

EXTERNAL DEFECTS

Defects	Maximum allowed for U.S. No. 1 processing	Maximum allowed for U.S. No. 2 processing
Air cracks	5% waste	10% waste.
Blackleg	5% waste	10% waste.
Bruises	5% waste	10% waste.
Cuts	Smooth, not more than 10% of surface.	Smooth, not more than 1/3 of surface.
Enlarged lenticels, discolored or sunken.	5% waste	10% waste.
Flea Beetle	5% waste	10% waste.
Folded end	5% waste	10% waste.
Fusarium tuber rot	5% waste	10% waste.
Grass, wireworm ..	5% waste	10% waste.
Greening, light	5% waste	10% waste.
Growth cracks	See Footnote No. 2.	10% waste.
Grub	5% waste	10% waste.
Ingrown sprouts ...	5% waste	10% waste.