



**United States  
Department of  
Agriculture**

**Agricultural  
Marketing  
Service**

**Fruit and  
Vegetable  
Division**

**Fresh  
Products  
Branch**

# **United States Standards for Grades of Broccoli for Processing**

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# United States Standards for Grades of Broccoli for Processing <sup>1</sup>

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## **Grades**

### **§51.425 U.S. No. 1.**

"U.S. No. 1" consists of stalks or portions of stalks of broccoli (see §51.427) which are fresh, tender, and have good characteristic color and compact heads, are well trimmed and which are free from decay and cull material, and are free from damage caused by discoloration, freezing, hollow stem or pithiness, scars, dirt or other foreign material, disease, insects or mechanical or other means.

(a) Unless otherwise specified, the length shall be not more than 6 inches nor less than 4 inches, and the diameter of the stem shall be not less than three-eighths inch (see §51.429).

### **§51.426 U.S. No. 2.**

"U.S. No. 2" consists of stalks or portions of stalks of broccoli (see §51.427) which are fresh, tender, and have good characteristic color and fairly compact heads, are fairly well trimmed and which are free from decay and cull material and are free from damage caused by scars, dirt or other foreign material, disease, insects, are free from serious damage caused by discoloration,

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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.

freezing, hollow stem or pithiness or mechanical or other means.

(a) Unless otherwise specified, the length shall be not more than 6 inches nor less than 3 inches, and the diameter of the stem shall be not less than one-fourth inch (see §51.429).

### **Basis for Grading Broccoli**

#### **§51.427 Basis for grading broccoli.**

(a) Large stalks of broccoli shall be cut lengthwise into halves or quarters to remove defective portions. A proportionate ratio of head material to stem material must be maintained in each segment.

(b) Stalks with heads smaller than 1-1/2 inches in diameter shall not be cut, but shall be graded as one unit.

### **Culls**

#### **§51.428 Culls.**

"Culls" are stalks of broccoli which fail to meet the requirements of the U.S. No. 2 grade.

### **Cull Material**

#### **§51.429 Cull material.**

"Cull material" means all foreign material, any portion of the stem in excess of the maximum length specified, all stalks under the minimum length specified for the U.S. No. 2 grade, and all coarse, damaged and discolored leaves, and leaves extending more than 1-1/2 inches above the top of the head.

### **Definitions**

#### **§51.430 Stalk.**

"Stalk" means an individual unit of broccoli which consists of the stem, head cluster and any attached leaves.

#### **§51.431 Fresh.**

"Fresh" means that the broccoli is not badly wilted or excessively flabby.

#### **§51.432 Tender.**

"Tender" means that the broccoli stem within the specified maximum length is succulent, and practically free from fibrous material and is not tough or stringy.

#### **§51.433 Good characteristic color.**

"Good characteristic color" means that the stem and external portion of the head has a light green or darker shade of green color, except that purplish color shall also be allowed on the external portion of the head.

#### **§51.434 Compact head.**

"Compact head" means that the individual head is closely formed, not open or spread to the extent that it has a loose appearance, and that the individual florets are fairly tightly formed and not more than moderately elongated.

#### **§51.435 Well trimmed.**

"Well trimmed" means that the presence of small side shoots or ragged or partially removed side shoots or leaves does not materially detract from the appearance of the stalk.

#### **§51.436 Damage.**

"Damage", unless otherwise specifically defined in this section, means any defect which more than slightly detracts from the appearance, or the processing or edible quality of the stalk, within the maximum length specified. Any one of the following defects, or any combination of defects the

seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

- (a) Discoloration when more than very slight, or which will not change to light green or darker shade of green color in the ordinary process of blanching;
- (b) Freezing when causing more than slight discoloration of the individual stalk;
- (c) Hollow stem or pithiness when discolored, or when more than slightly detracting from the appearance of the individual stalk;
- (d) Scars when discolored, or when more than slight or superficial;
- (e) Dirt or other foreign material which cannot be removed in the ordinary washing process;
- (f) Disease when showing discoloration, or when more than slightly detracting from the appearance, or the processing or edible quality; and,
- (g) Insects when the broccoli is more than slightly infested or more than slightly blemished by feeding or other means.

**§51.437 Fairly compact head.**

"Fairly compact head" means that the individual head is fairly closely formed and not excessively spread and that the florets are not on the verge of opening and will not open in the ordinary process of blanching.

**§51.438 Fairly well trimmed.**

"Fairly well trimmed" means that the presence of small side shoots or ragged or partially removed side shoots or leaves does not seriously detract from the appearance of the stalk.

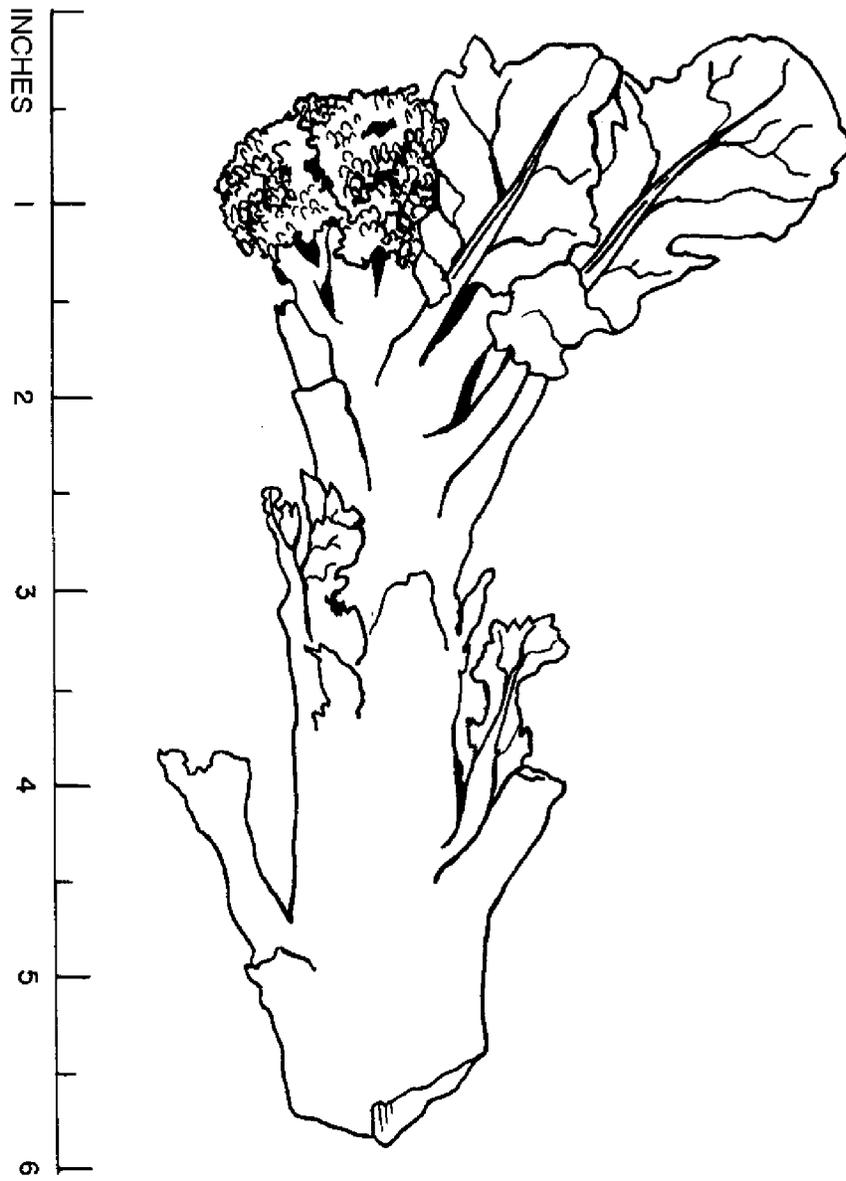
**§51.439 Serious damage.**

"Serious damage", unless otherwise specifically defined in this section, means any defect which materially detracts from the appearance, or the processing or edible quality of the stalk, within the maximum length specified. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:

- (a) Discoloration when the appearance of the individual stalk is materially affected;
- (b) Freezing when causing discoloration which materially detracts from the appearance of the individual stalk; and,
- (c) Hollow stem or pithiness when discolored, or when materially detracting from the appearance of the individual stalk. Stalks which show a ragged appearance or deep holes shall be considered as serious damage.

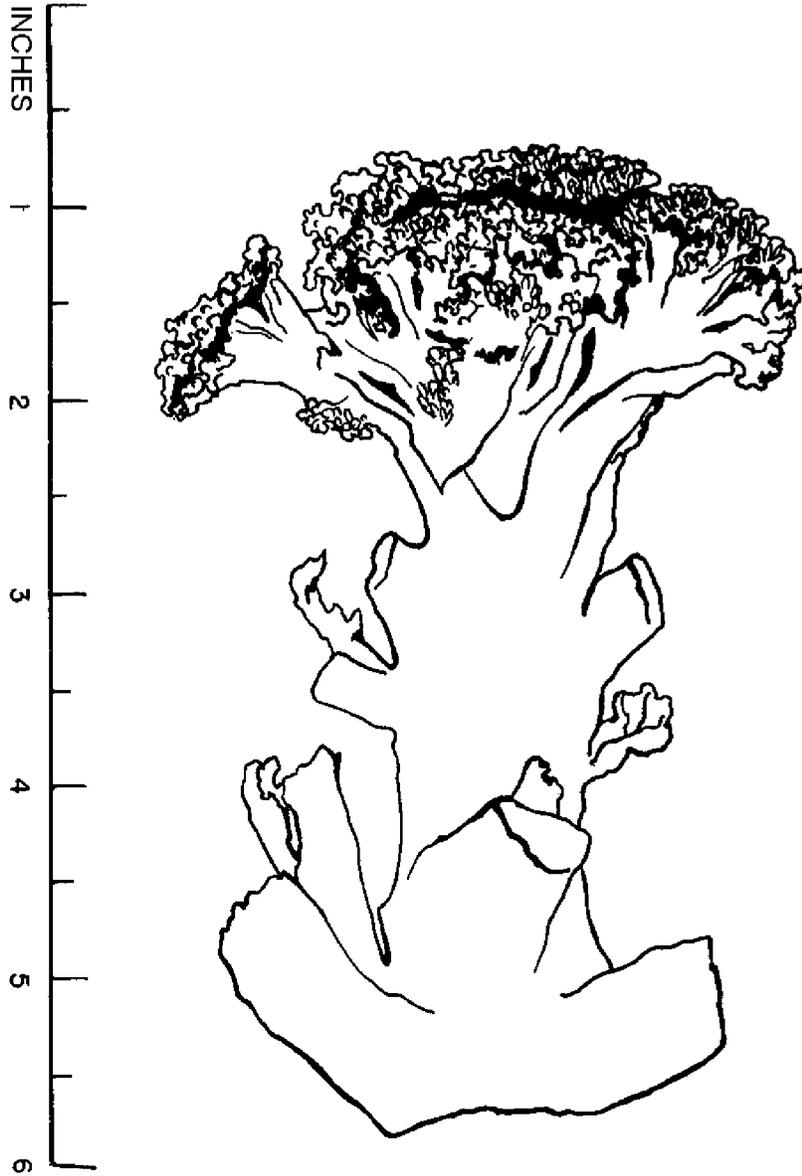
**§51.440 Diameter.**

"Diameter" means the greatest thickness of the stem measured at a point 6 inches from the top of the head, except that stems which are less than 6 inches in length shall be measured at the base of the stem.



WELL TRIMMED LOWER LIMIT

Illustration BROPR 1



FAIRLY WELL TRIMMED LOWER LIMIT

Illustration BROPR 2