



**United States
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Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Fresh
Products
Branch**

United States Standards for Grades of Celery

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United States Standards for Grades of Celery ¹

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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.

Grades

§51.560 U.S. Extra No. 1.

"U.S. Extra No. 1" consists of stalks of celery of similar varietal characteristics which are well developed, well formed, clean, well trimmed, compact, and which are free from blackheart, brown stem, soft rot, doubles and free from damage caused by freezing, growth cracks, horizontal cracks, pithy branches, seedstems, suckers, wilting, blight, other disease, insects or mechanical or other means. Stalks shall be green unless specified as fairly well blanched, or mixed blanch.

(a) The average midrib length of the outer whorl of branches shall be not less than 7 inches.

(b) Unless otherwise specified in connection with the grade, stalks shall be of such length as to extend from one side, end or bottom of the container to within 1-1/2 inches of the corresponding opposite side, end or top of the container. Such measurement shall not include the bulge. In any container when stalk length is specified, it shall be the minimum length in terms of whole inches of even number, as 12 inches, 14 inches, etc., in accordance with the facts.

(c) In order to allow for variations incident to proper grading and handling, the following tolerances shall be permitted:

(1) **For defects.** 10 percent, by count, in any lot for stalks which fail to meet the requirements of the grade, including therein not more than 2 percent for soft rot;

(2) **For off-length stalks.** 5 percent, by count, in any lot for stalks which fail to meet the minimum length required or specified; and,

(3) **For off-length midribs.** 5 percent, by count, in any lot for stalks which fail to meet the requirements as to average midrib length.

§51.561 U.S. No. 1.

"U.S. No. 1" consists of stalks of celery of similar varietal characteristics which are fairly well developed, fairly well formed, well trimmed, fairly compact, and which are free from blackheart and soft rot and free from damage caused by freezing, growth cracks, horizontal cracks, pithy branches, seedstems, suckers, dirt, doubles, wilting, blight, other disease, insects or mechanical or other means. Stalks shall be green unless specified as fairly well blanched, or mixed blanch.

(a) Unless otherwise specified, the average midrib length of the outer whorl of branches shall be not less than 6 inches.

(b) Unless otherwise specified in connection with the grade, stalks shall be of such length as to extend from one side, end or bottom of the container to within 1-1/2 inches of the corresponding opposite side, end or top of the container. Such measurement shall not include the bulge. In any container when stalk length is specified, it shall be the minimum length in terms of whole inches of even number, as 12 inches, 14 inches, etc., in accordance with the facts.

(c) In order to allow for variations incident to proper grading and handling, the following tolerances shall be permitted:

(1) **For defects.** 10 percent, by count, in any lot for stalks which fail to meet the requirements of the grade, including therein not more than 2 percent for soft rot;

(2) **For off-length stalks.** 5 percent, by count, in any lot for stalks which fail to meet the minimum length required or specified; and,

(3) **For off-length midribs.** 5 percent, by count, in any lot for stalks which fail to meet the requirements as to average midrib length.

§51.562 U.S. No. 2.

"U.S. No. 2" consists of stalks of celery of similar varietal characteristics which are reasonably well developed, reasonably well formed, fairly well trimmed and are free from blackheart and soft rot and free from serious damage caused by freezing, growth cracks, horizontal cracks, pithy branches, seedstems, dirt, doubles, wilting, blight, other disease, insects or mechanical or other means. Stalks shall be green unless specified as fairly well blanched, or mixed blanch.

(a) Unless otherwise specified, the average midrib length of the outer whorl of branches shall be not less than 4 inches.

(b) Unless otherwise specified in connection with the grade, stalks shall be of such length as to extend from one side, end or bottom of the container to within 1-1/2 inches of the corresponding opposite side, end or top of the container. Such measurement shall not include the bulge. In any container when stalk length is specified, it shall be the minimum length in terms of whole inches of even number, as 12 inches, 14 inches, etc., in accordance with the facts.

(c) In order to allow for variations incident to proper grading and handling, the following tolerances shall be permitted:

(1) **For defects.** 10 percent, by count, in any lot for stalks which fail to meet the requirements of the grade, including therein not more than 2 percent for soft rot;

(2) **For off-length stalks.** 5 percent, by count, in any lot for stalks which fail to meet the minimum length required or specified; and,

(3) **For off-length midribs.** 5 percent, by count, in any lot for stalks which fail to meet the requirements as to average midrib length.

Unclassified

§51.563 Unclassified.

"Unclassified" consists of stalks of celery which have not been classified in accordance with any of the foregoing grades. 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.

Count

§51.564 Requirements as to count.

(a) The number of stalks of celery in the container may be specified by numerical count or in terms of dozens or half-dozens. Variations from the number specified shall be permitted as follows: **Provided,** That the average for the lot is not less than the number specified:

Specified number per package:	Variations permitted in individual packages
24 stalks or less	1 stalk variation.
25 to 50 stalks, inclusive	3 stalk variation.
51 to 70 stalks, inclusive	4 stalk variation.
More than 70 stalks	5 stalk variation.

Application of Tolerances

§51.565 Application of tolerances.

(a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations: **Provided**, That the averages for the entire lot are within the tolerances specified:

(1) For packages which contain 20 specimens or more and a tolerance of 10 percent or more is provided, individual packages in any lot may contain not more than one and one-half times the tolerance specified. For packages which contain 20 specimens or more and a tolerance of less than 10 percent is provided, individual packages may contain not more than double the tolerance specified except that at least one defective and one off-size specimen may be permitted in any package; and,

(2) For packages which contain less than 20 specimens, individual packages in any lot may contain not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package: **Provided**, That for packages which contain 6 specimens or less, individual packages in any lot are not restricted as to the percentage of defects: **And provided further**, That not more than one specimen which is affected by decay or otherwise seriously damaged and one off-size specimen may be permitted in any package.

Definitions

§51.566 Stalk.

"Stalk" means an individual plant.

§51.567 Similar varietal characteristics.

"Similar varietal characteristics" means that the stalks in any package have the same general appearance and character of growth.

§51.568 Well developed.

"Well developed" means that the branches are of good width and thickness in relation to the length of midribs and type of celery and that the heart branches are of reasonable number, length and stockiness.

§51.569 Well formed.

"Well formed" means that the branches are fairly straight and not more than slightly curved or twisted.

§51.570 Clean.

"Clean" means that the stalk is practically free from dirt or other foreign material. Stalks shall be permitted to have a small amount of dirt on the inside of the branches or in the heart branches which cannot be removed by good commercial methods of washing.

§51.571 Well trimmed.

"Well trimmed" means that not more than 2 relatively thin, short or spindly, or coarse and fibrous outer branches remain; that the main root has been cut off so as not to extend more than 1-1/2 inches below the point of attachment of the lowest outer branch; that secondary rootlets are not of such number or length as to materially affect the appearance of the stalk; and, that the appearance is not materially affected by the presence of discolored leaves or by excessive removal of leaves or portions of leaves.

§51.572 Compact.

"Compact" means that the branches on the stalk are fairly close together throughout most of their length.

§51.573 Damage.

"Damage", unless otherwise specifically defined in this section, means any defect which materially affects the appearance, or the edible or shipping quality of the celery stalk or the general appearance of the stalks in the container. 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) Growth cracks when more than 2 branches are affected by growth cracks which are over one-half inch in length, or when more than 6 branches have growth cracks;
- (b) Horizontal cracks when more than 3 branches have horizontal cracks which are over one-half inch in length, or when more than 6 branches have horizontal cracks;
- (c) Pithy branches when more than 2 are pithy in that portion of the midrib between a point 1-1/2 inches above the point of attachment to the base and the first node, or between a point 1-1/2 inches below the first node and the point of attachment to the base, or when pith occurs at both ends of the midrib and more than a total of 1-1/2 inches is affected: **Provided**, That stalks having 6 outer branches or less shall have not more than one-third of the outer branches affected by pith as described above;
- (d) Seedstems when the length of seedstem exceeds twice the diameter of the stalk or 8 inches in length (see §§51.587 and 51.588);
- (e) Dirt when there is caked dirt on the stalk, or when dirt is present between the branches to the extent that the appearance is materially affected;
- (f) Doubles when not separated and the appearance is materially affected, or when separated and either of the stalks is badly curved;
- (g) Disease: (1) Brown stem, cracked stem and crater blotch when materially affecting more than 2 branches, or when the aggregate area exceeds two-thirds of a square inch on the branches; and, (2) Discoloration when each of more than 2 branches or 1/4 of the branches of the stalk, whichever is less, has more than 3 distinct hair-like lines more than 3 inches long occurring on the outer side of the branch or an aggregate area of more than 1/4 by 1 inch of blotch or solid type discoloration occurring on the inner side;
- (h) Insects when worms are present, or when insect injury occurs on heart branches, or when insect injury affects the midrib portion of more than 2 branches, or when injury on other portions materially affects the appearance of the stalk; and,
- (i) Mechanical injury when the root has been cut off too closely leaving the branches without support; when more than 2 branches are materially scuffed or bruised; when the branches have been broken above the first node to an extent which materially affects the appearance; or when more than 2 branches are broken below the first node except that all branches may be cut below the first node provided the stalk is of the length specified.

§51.574 Green.

"Green" means that the middle portions of the outer branches on the stalk are generally green to light green color.

§51.575 Fairly well blanched.

"Fairly well blanched" means that the midrib portions of the outer branches on the stalk are generally of a creamy white to pale green color.

§51.576 Mixed blanch.

"Mixed blanch" consists of green and fairly well blanched stalks of celery in the same container.

§51.577 Average midrib length.

"Average midrib length" means the average length of all the branches in the outer whorl measured from the point of attachment at the base to the first node.

§51.578 Branch.

"Branch" means the leaf of a stalk and consists of the edible stem-like portion and the tops or leaf blades.

§51.579 Length of stalk.

"Length of stalk" means the distance from where the root is cut off to a point which represents the average length of the longest branches.

§51.580 Fairly well developed.

"Fairly well developed" means that the branches are of fairly good width and thickness in relation to the length of midribs and type of celery and that there is not excessive open space in the center of the stalk.

§51.581 Fairly well formed.

"Fairly well formed" means that the branches are reasonably straight and not more than moderately curved or twisted.

§51.582 Fairly compact.

"Fairly compact" means that the branches on the stalk are reasonably close together throughout most of their length.

§51.583 Reasonably well developed.

"Reasonably well developed" means that the branches are of reasonable width and thickness in relation to the length of midribs and type of celery.

§51.584 Reasonably well formed.

"Reasonably well formed" means that the branches are not crooked, curved or twisted to the extent that the appearance of the stalk is seriously affected.

§51.585 Fairly well trimmed.

"Fairly well trimmed" means that the main root has been cut off so that it does not extend more than 3 inches below the point of attachment of the lowest outer branch, and that secondary rootlets are not of such number or length as to seriously affect the appearance of the stalk.

§51.586 Serious damage.

"Serious damage", unless otherwise specifically defined in this section, means any defect which seriously affects the appearance, or the edible or shipping quality of the celery stalk or the general appearance of the stalks in the container. 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) Growth cracks when more than 4 branches are affected by growth cracks which are over one-half inch in length, or when more than 8 branches have growth cracks;
- (b) Horizontal cracks when more than 5 branches have horizontal cracks which are over one-half inch in length, or when more than 8 branches have horizontal cracks;
- (c) Pithy branches when more than 4 are pithy in that portion of the midrib between a point 1-1/2 inches above the point of attachment to the base and the first node, or between a point 1-1/2 inches

below the first node and the point of attachment to the base, or when pith occurs at both ends of the midrib and more than a total of 1-1/2 inches is affected: **Provided**, That stalks having 6 outer branches or less shall have not more than one-half of the outer branches affected by pith as described above;

(d) Seedstems when the length of seedstem exceeds 3 times the diameter of the stalk (see §§51.587 and 51.588);

(e) Dirt when dirt is badly caked on the stalk;

(f) Doubles when the inner branches are not fairly well protected;

(g) Disease: (1) Brown stem, cracked stem and crater blotch when seriously affecting more than 4 branches, or when the aggregate area exceeds 1 square inch on the branches; and,

(2) Discoloration when each of more than 5 branches or 1/2 of the branches of the stalk, whichever is less, has more than 3 distinct hair-like lines more than 3 inches long occurring on the outer side of the branch or an aggregate area of more than 1/4 by 1 inch of blotch or solid type discoloration occurring on the inner side;

(h) Insects when worms are present, or when insect injury affects the midrib portion of more than 4 branches, or when injury on other portions seriously affects the appearance of the stalk; and,

(i) Mechanical injury when the root has been cut off too closely leaving the branches without support; when more than 4 branches are materially scuffed or bruised; when the branches have been broken above the first node to an extent which seriously affects the appearance; or when more than 4 branches are broken below the first node except all branches may be cut below the first node provided the stalk is of the length specified.

§51.587 Diameter.

"Diameter" means the greatest dimension of the stalk measured at a point 2 inches above the point of attachment of the lowest outer branch to the base.

§51.588 Length of seedstem.

"Length of seedstem" means the distance from the base of the outer branches of the stalk to the top of the actual seedstem, exclusive of any leaves or leafstems attached to the top of the seedstem.



WELL FORMED
LOWER LIMIT "BOWING"
U.S. EXTRA NO. 1

Illustration CEL 1



FAIRLY WELL FORMED
LOWER LIMIT "BOWING"
U.S. NO. 1

Illustration CEL 2



WELL FORMED
LOWER LIMIT "TWISTING"
U.S. EXTRA NO. 1

Illustration CEL 3



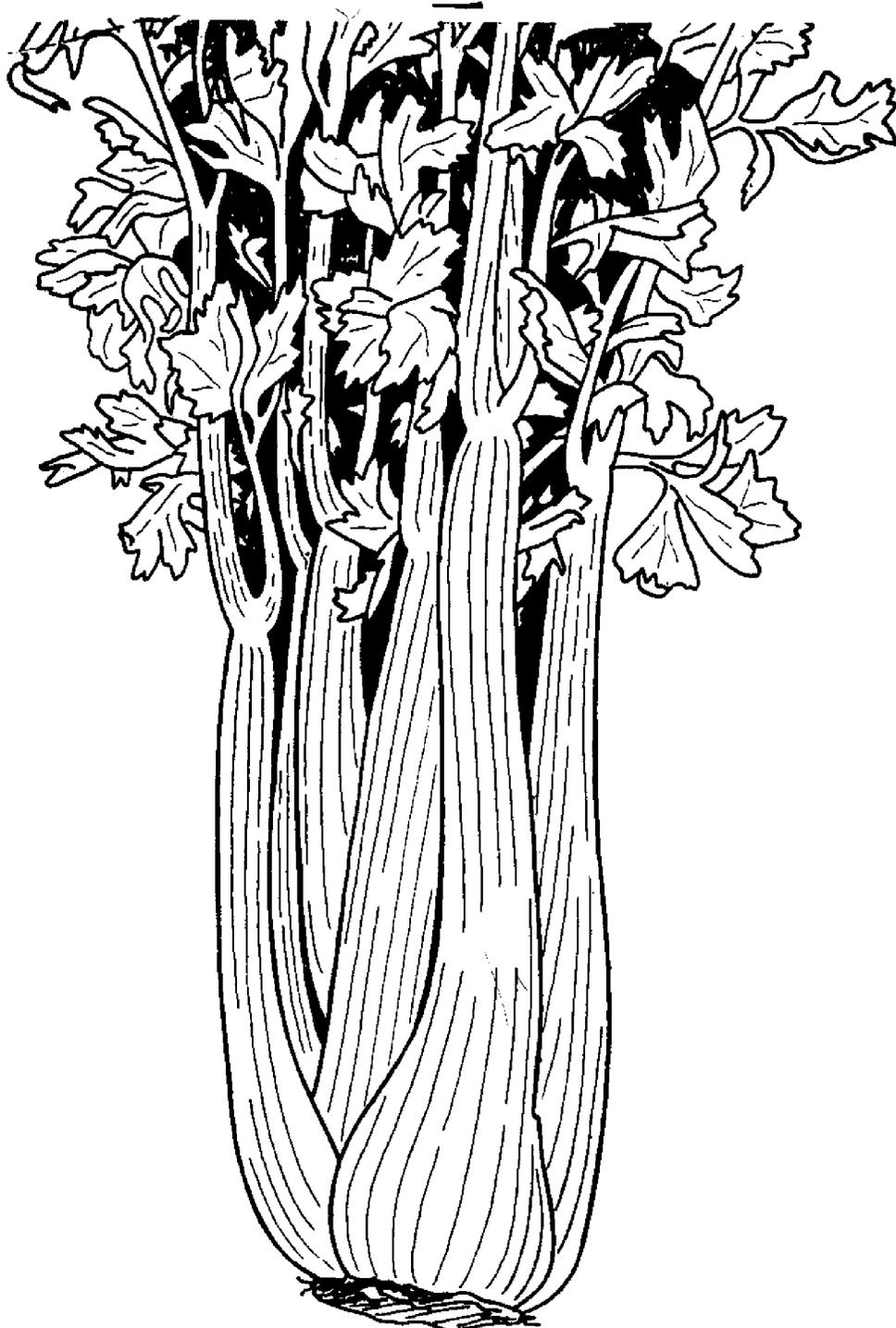
WELL FORMED
LOWER LIMIT COMBINATION
"BOWING" & "TWISTING"
U.S. EXTRA NO. 1

Illustration CEL 4



FAIRLY WELL FORMED
LOWER LIMIT "TWISTING"
U.S. NO. 1

Illustration CEL 5



WELL DEVELOPED LOWER LIMIT
WIDTH & THICKNESS OF MIDRIBS
U.S. EXTRA NO. 1

Illustration CEL 6



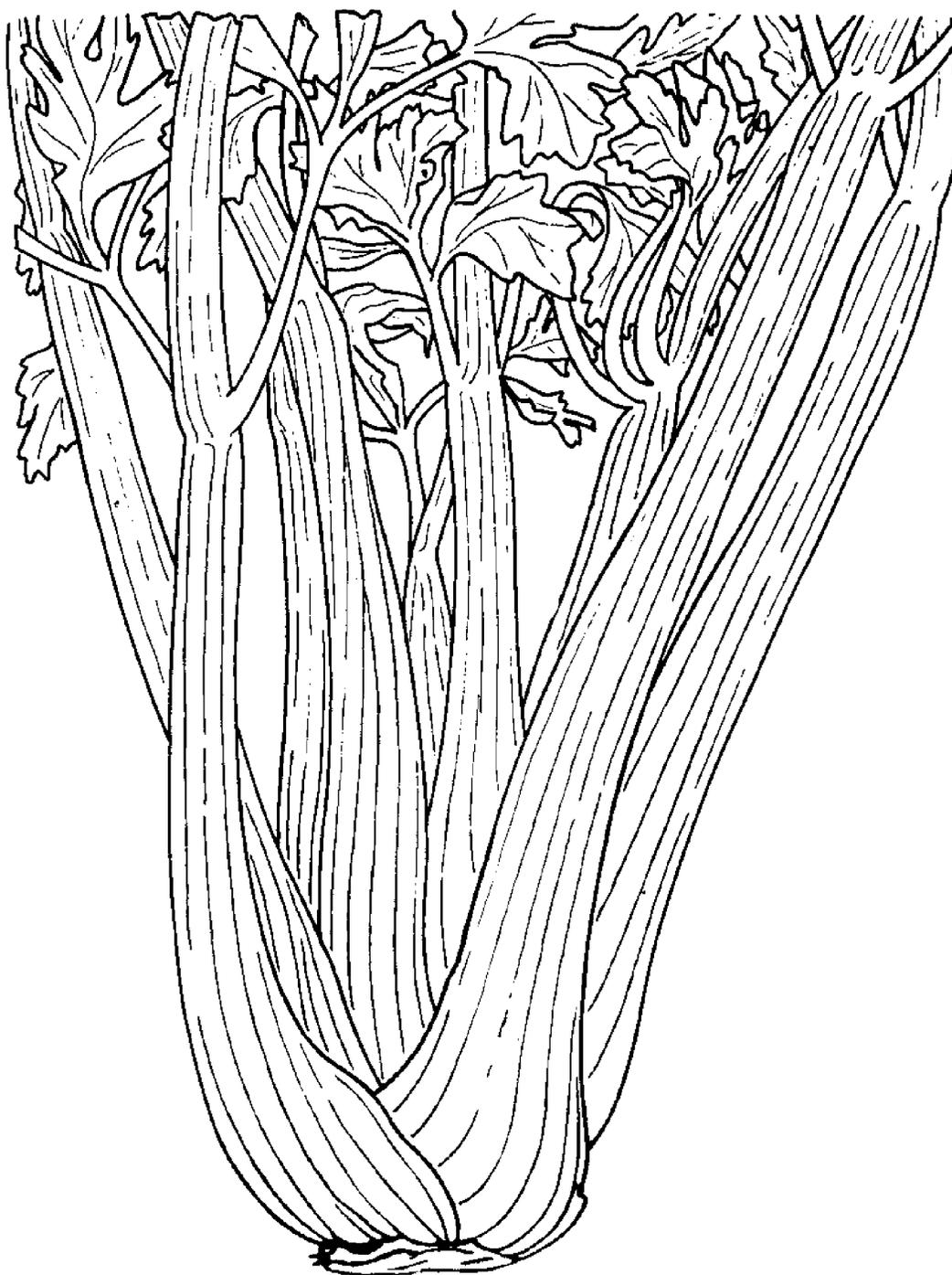
FAIRLY WELL DEVELOPED LOWER LIMIT
WIDTH & THICKNESS OF MIDRIBS
U.S. NO. 1

Illustration CEL 7



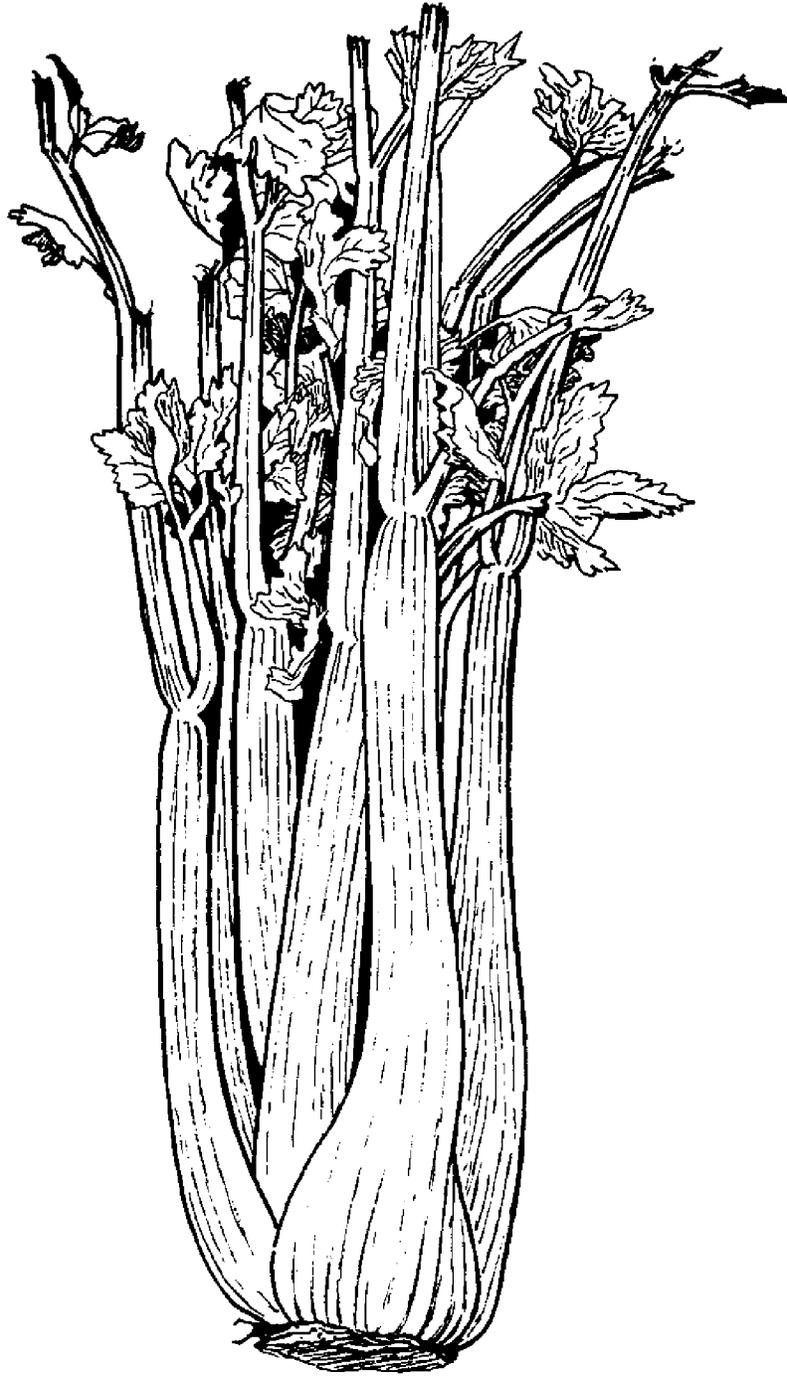
COMPACT - LOWER LIMIT
U.S. EXTRA NO. 1

Illustration CEL 8



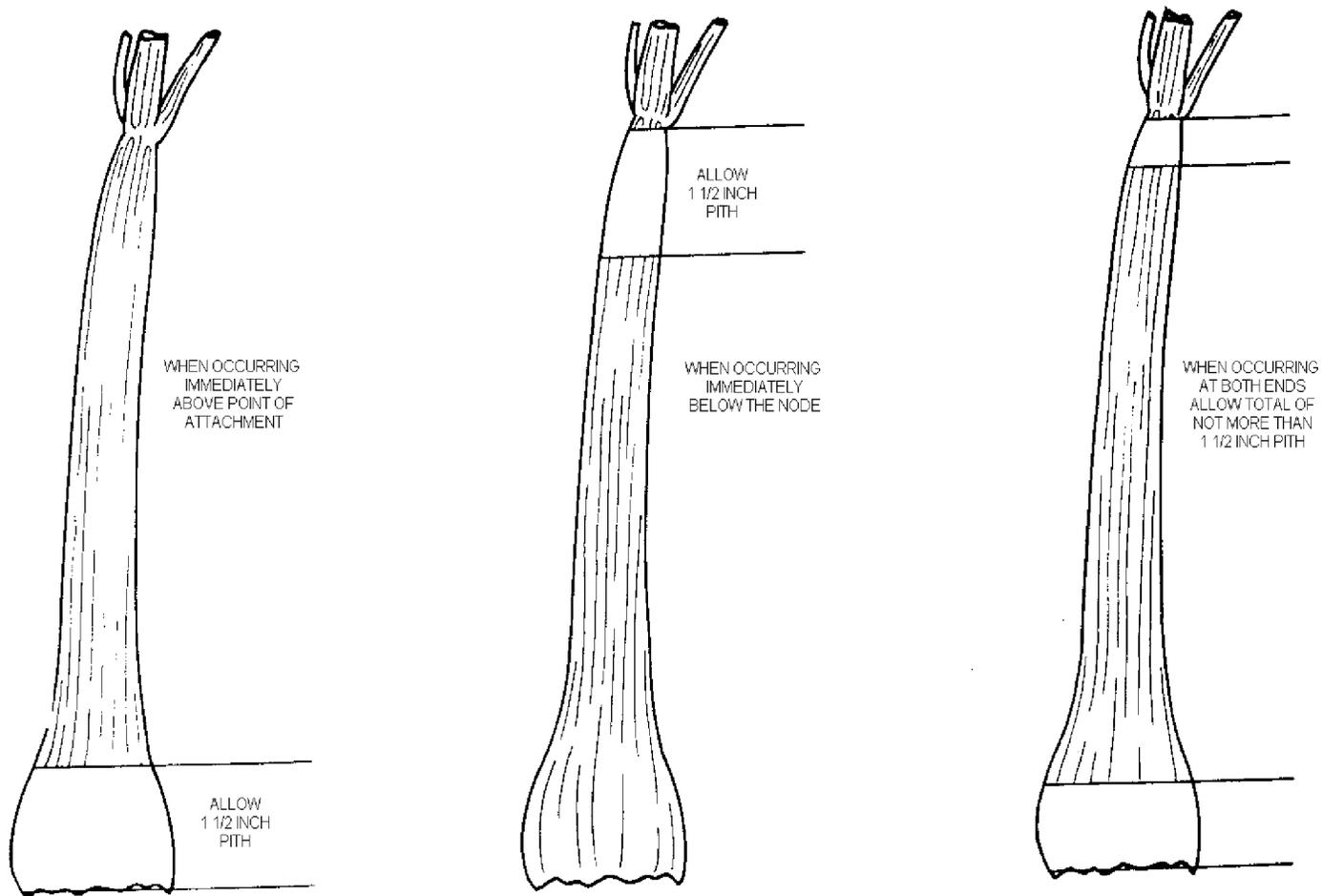
FAIRLY COMPACT - LOWER LIMIT
U.S. NO. 1

Illustration CEL 9



WELL TRIMMED
MAXIMUM EXTENT APPEARANCE MAY BE AFFECTED
BY REMOVAL OF LEAVES OR PORTIONS OF LEAVES
U.S. EXTRA NO. 1 & U.S. NO. 1

Illustration CEL 10



DEFINITION OF PITHY BRANCH

NO PITH PERMITTED IN SHADED PORTION BELOW FIRST NODE IN ANY EXAMPLE

Illustration CEL 11