



**United States
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**Agricultural
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Service**

**Fruit and
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Programs**

**Fresh
Products
Branch**

United States Standards for Grades of Christmas Trees

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United States Standards for Grades of Christmas Trees

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General

§51.3085 General.

The standards contained in this subpart are applicable to sheared or unsheared trees of the coniferous species which are normally marketed as Christmas trees. The majority of the Christmas trees marketed are of the following species:

Douglas Fir (*Pseudotsuga Menziesii*); Balsam Fir (*Abies Balsamea*); Red Fir (*Abies Magnifica*); White Fir (*Abies Concolor*); Fraser Fir (*Abies Fraseri*); Grand Fir (*Abies Grandis*); Noble Fir (*Abies Procera*); White Spruce (*Picea Glauca*); Blue Spruce (*Picea Pungens*); Eastern Red Cedar (*Juniperus Virginiana*); Red Pine (*Pinus Resinosa*); White Pine (*Pinus Strobus*); Virginia Pine (*Pinus Virginiana*); Scotch Pine (*Pinus Sylvestris*).

Grades

§51.3086 U.S. Premium.

"U.S. Premium" consists of trees which meet the following requirements:

- (a) Characteristics typical of the species;
- (b) Butt trimmed; except for trees graded "on the stump";
- (c) Normal taper;
- (d) Fresh;
- (e) Clean;
- (f) Healthy;
- (g) Well shaped;
- (h) Not less than heavy density;
- (I) Handle length, unless otherwise specified, shall be not less than 6 inches, or more than 1-1/2 inches for each foot of tree height. For trees graded "on the stump", handle length will not be a requirement of the grade;
- (j) Three faces with not more than 1 minor defect. Remaining face may not have more than 1 minor defect;
- (k) For size see §51.3090;
- (l) For tolerances see §51.3091.

§51.3087 U.S. No. 1.

"U.S. No. 1" consists of trees which meet the following requirements:

- (a) Characteristics typical of the species;
- (b) Butt trimmed; except for trees graded "on the stump";
- (c) Normal taper;
- (d) Fresh;
- (e) Fairly clean;
- (f) Healthy;
- (g) Well shaped;
- (h) Not less than medium density;
- (I) Handle length, unless otherwise specified, shall be not less than 6 inches, or more than 1-1/2 inches for each foot of tree length. For trees graded "on the stump", handle length will not be a requirement of the grade;
- (j) Three faces with not more than 2 minor defects. Remaining face may not have more than 1 noticeable defect;
- (k) For size see §51.3090;
- (l) For tolerances see §51.3091.

§51.3088 U.S. No. 2.

"U.S. No. 2" consists of trees which meet the following requirements:

- (a) Characteristics typical of the species;
- (b) Butt trimmed; except for trees graded "on the stump";
- (c) Normal taper;
- (d) Fresh;
- (e) Fairly clean;
- (f) Healthy;
- (g) Well shaped;

- (h) Not less than light density;
- (i) Handle length, unless otherwise specified, shall be not less than 6 inches, or more than 1-1/2 inches for each foot of tree length. For trees graded "on the stump", handle length will not be a requirement of the grade;
- (j) Two adjacent faces with not more than 3 minor defects. Remaining faces may not have more than 2 noticeable defects;
- (k) For size see §51.3090;
- (l) For tolerances see §51.3091.

Culls

§51.3089 Culls.

"Culls" consist of individual trees which fail to meet the requirements of the U.S. No. 2 grade. (See §51.3105 Table II).

Size

§51.3090 Size.

(a) Height of trees shall be stated in foot increments and unless otherwise specified, the following color codes will be used to designate the respective sizes:

COLOR	TREE HEIGHT (Feet)
Lime	3 feet or less
Orange	Over 3 to 4
Blue	Over 4 to 5
Red	Over 5 to 6
Yellow	Over 6 to 7
Green	Over 7 to 8
White	Over 8 to 9
Pink	Over 9 feet

(b) In determining which designations apply, the measurement for the height is the distance from the base of the handle to the top of the main leader, excluding that portion of the leader that extends more than 4 inches above the apex of the cone of the taper applicable to the tree.

(c) In any size range, a minimum of 1/3 of the trees in a lot shall be in the top half of that size range.

Tolerances

§51.3091 Tolerances.

In order to allow for variations incident to proper sizing, grading and handling in each of the foregoing grades the following tolerances, by count, shall apply when a lot of Christmas trees is required to meet a specific grade.

(a) For total defects, 10 percent for Christmas trees in any lot which fail to meet the requirements for the grade: **Provided**, That included in this amount not more than the following percentages shall be allowed for defects listed:

- (1) Off-size. Five percent for trees which fail to meet the height specified.
- (2) Off-length handle. Ten percent for trees which fail to meet the requirement for handle length, but which meet all other requirements for the specified grade.
- (3) Defects. Ten percent for trees which fail to meet the remaining requirements of the grade.

Definitions

§51.3092 Fresh.

"Fresh" means the needles are green, pliable, and firmly attached; with not more than slight shedding.

§51.3093 Clean.

"Clean" means the tree is reasonably free from foreign material.

§51.3094 Healthy.

"Healthy" means the needles have a fresh, natural appearance characteristic of the species.

§51.3095 Well shaped.

"Well shaped" means that the tree is not flat on one side and the branches of the tree, whether sheared or unsheared, are of sufficient number and length to form a conical outline tapering from the lowest whorl of branches to the top.

§51.3096 Butt trimmed.

"Butt trimmed" means that all barren branches shall have been removed, and the trunk has been smoothly cut at approximately right angles to the trunk.

§51.3097 Density.

"Density" means the amount of foliage on the tree. Factors contributing to degree of density are: The number and size of branches within the whorl, distance between the whorls, number and arrangements of the branchlets on each branch, the extent of internodal branching, needle arrangement, and needle length. Species differ in their habit of growth and some species do not have internodal branches. Density is judged on the basis of species characteristics.

(a) "Heavy density" means the whorls or branches are relatively close together, the spaces between are filled with needles and twigs so that the following species have said percentage of foliage so the main stem is not visible and the needle content and length are adequate to cover the branches:

NAME	PERCENTAGE OF MAIN STEM COVERED
Red Cedar	90 to 100%
Balsam Fir	80 to 100%
Douglas Fir	90 to 100%
Fraser Fir	70 to 100%
Red Fir	60 to 100%
White Fir	70 to 100%
Grand Fir	80 to 100%
Noble Fir	60 to 100%
Red Pine	70 to 100%
Scotch Pine	90 to 100%
Virginia Pine	90 to 100%

White Pine	90 to 100%
Spruce (all)	80 to 100%

(b) "Medium density" means the whorls or branches are reasonably close together, the spaces between are filled with twigs and needles so that the following species have said percentage of foliage so the main stem is not visible and the needle content and length are adequate to cover the branches:

NAME	PERCENTAGE OF MAIN STEM COVERED
Red Cedar	70 to 90%
Balsam Fir	60 to 80%
Douglas Fir	70 to 90%
Fraser Fir	50 to 70%
Red Fir	50 to 60%
White Fir	50 to 70%
Grand Fir	60 to 80%
Noble Fir	50 to 60%
Red Pine	60 to 70%
Scotch Pine	70 to 90%
Virginia Pine	70 to 90%
White Pine	70 to 90%
Spruce (all)	60 to 80%

(c) "Light density" means the whorls or branches are reasonably spaced, the spaces between are only partially filled so that the following species have said percentage of foliage so the main stem is not visible and the needle content and length are adequate to cover the branches:

NAME	PERCENTAGE OF MAIN STEM COVERED
Red Cedar	50 to 70%
Balsam Fir	40 to 60%
Douglas Fir	50 to 70%
Fraser Fir	40 to 50%
Red Fir	40 to 50%
White Fir	40 to 50%
Grand Fir	40 to 60%
Noble Fir	40 to 50%
Red Pine	40 to 60%
Scotch Pine	50 to 70%
Virginia Pine	50 to 70%
White Pine	50 to 70%

Spruce (all) 40 to 60%

§51.3098 Normal taper.

"Normal taper" means the relationship of the width of the tree at its lowest branches to the height of the tree, less the handle, judged from its best side. All trees shall form a cone, the base of which is from 40 to 100 percent of its height.

§51.3099 Face.

"Face" means the visible area of a tree as viewed from a distance of 8 to 10 feet from the tree. A tree shall be considered as having four faces, each consisting of one-quarter of the surface area of the tree.

§51.3100 Fairly clean.

"Fairly clean" means that the tree is moderately free from foreign material.

§51.3101 Handle.

"Handle" means that the portion of the trunk between the butt or base of the tree and the lowest complete whorl of foliated branches.

§51.3102 Height.

"Height" means the distance from the base of the handle to the top of the main leader, excluding that portion of the leader that extends more than 4 inches above the apex of the cone of the taper applicable to the tree.

§51.3103 Minor defects.

"Minor defects" are slight imperfections in the development of the tree or defects resulting from handling, which materially affect the appearance of the tree. While many minor defects may be visible from more than 1 face, a given defect shall be scored only once. (See §51.3105 Table I).

§51.3104 Noticeable defects.

"Noticeable defects" are imperfections in the development of the tree or defects resulting from handling, which seriously affect the appearance of the tree. While many noticeable defects may be visible from more than 1 face a given defect shall be scored only once. (See §51.3105 Table I).

§51.3105 Classification of defects.

Table I

Factor	Minor defects	Noticeable defects
1. Density.	Slight uneven density.	Moderately uneven density.
2. Curvature of main stem.	Slight, visible crook in the main stem. (4 inches or less from vertical).	Main stem visibly curved more than 4 but less than 6 inches from vertical.
3. Insect or disease damage.	Slight insect or disease damage.	Moderate insect or disease damage.
4. Broken branches.	1 broken whorl branch near the main stem.	Broken leader or more than 1 broken whorl branch adjacent main stem.
5. Physical damage.	Slight physical damage.	Moderate physical damage.

6. Foreign material and/or vines.	Slight amount of foreign material or vines.	Moderate amount of foreign material or vines.
7. Multiple leader stems.	Multiple leaders.	Crows nest.
8. Extra long branches.	Branch over 10 inches longer than other branches on corresponding whorl.	N/A.
9. Abnormal curling of needles.	Slightly abnormal curling of needles.	Moderately abnormal curling of needles.
10. Weak lower branches	Free from.	Weak lower branches affecting up to 3/4 of branches on bottom whorl.
11. Handle not proportionate to height.	Free from.	Handle not proportionate to height of tree.
12. Incomplete whorl of branches.	Less than 1/4 of branches are missing in a given whorl.	1/4 but less than 1/2 of branches are missing in a given whorl.
13. Holes or gaps in tree.	Free from.	Hole in the tree or space considerably out of proportion with the uniform branch characteristics of the balance of the tree.
14. Gooseneck.	Free from.	Free from.
15. Loss of needles.	Slight loss of needles.	Moderate loss of needles.

Table II

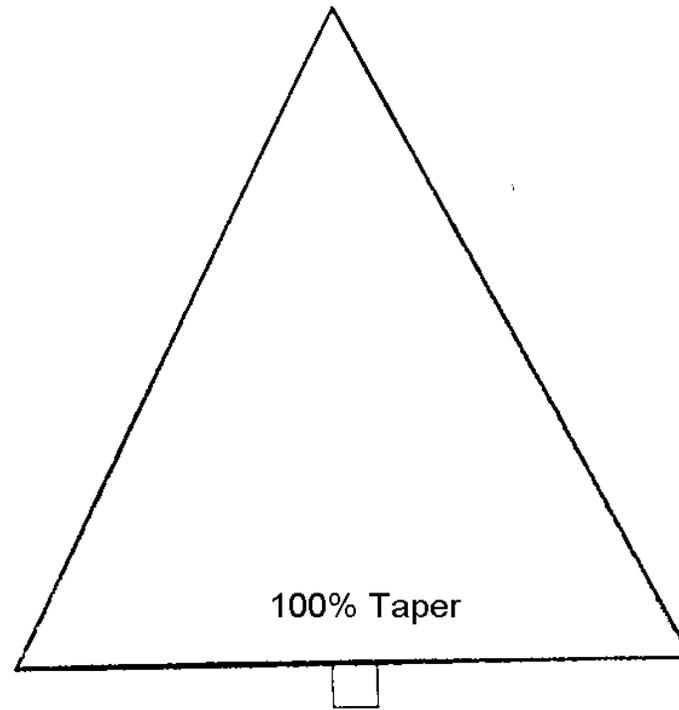
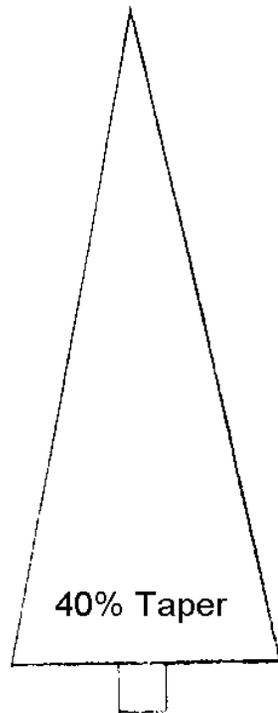
Factor	Culls
1. Density	Severely uneven density.
2. Curvature of mainstem.	Main stem curved more than 6 inches.
3. Insect or disease damage.	Severe insect or disease damage or abnormal curling of needles.
4. Broken branches	Main stem broken below top whorl or more than three branches broken near trunk.
5. Physical damage.	Severe physical damage.
6. Foreign material and/or vines.	Heavy amounts of foreign material or vines.
7. Multiple stems.	Multiple stems (not leaders).
8. Extra long branches.	N/A.
9. Abnormal curling of needles.	Severely abnormal curling of needles.
10. Weak lower branches.	Weak lower branches affecting more than 3/4 of branches of bottom whorl.
11. Handle not proportionate to height.	N/A.

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|-----------------------------------|---|
| 12. Incomplete whorl of branches. | More than 1/2 of branches missing on a given whorl or when missing branches create a shelf. |
| 13. Holes or gaps in tree. | Shelf or a decided gap or space between whorls of branches noticeable on 2 or more faces. |
| 14. Gooseneck. | Any gooseneck. |
| 15. Abnormal loss of needles. | Severe loss of needles. |

§51.3106 Metric conversion table.

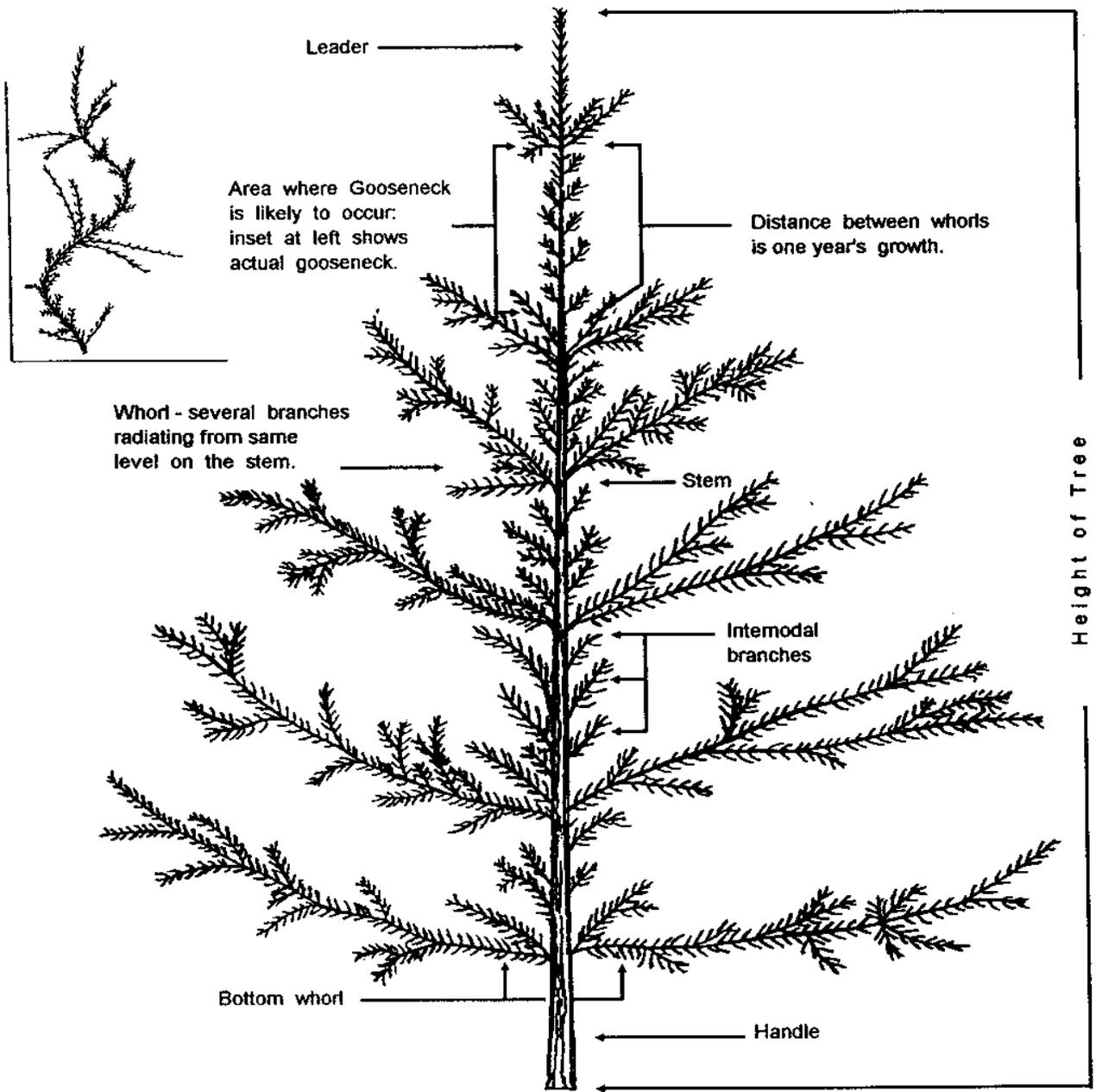
Metric Conversion Table

Feet	Centimeters (cm)
1	30.48
2	60.96
3	91.44
4	121.92
5	152.40
6	182.88
7	213.36
8	243.84
9	274.32
10	304.80



Christmas Tree Taper

Illustration XMT 1



CHRISTMAS TREE TERMINOLOGY

Illustration XMT 2