



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Programs**

**Fresh
Products
Division**

United States Standards for Grades of Cultivated Ginseng

Effective May 7, 2012

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General

§51.1325 General.

The standards apply to cultivated ginseng, such as American ginseng (*Panax quinquefolius*) and Asian ginseng (*Panax ginseng*). Ginseng that grows wild or naturally, rather than being planted and cultivated domestically or commercially, is not covered under these standards.

Grades

§51.1326 Grades.

All grades, U.S. No. 1 through U.S. No. 7, consist of cultivated ginseng which are of one root type, clean and well cured; which are free from external and internal defects, mold, and decay. The color and texture of the ginseng shall be specified with the grade; whereas, the origin may be

specified with the grade.

Tolerances

§51.1327 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by weight, reported to the nearest tenth of a percent, are provided as specified:

- (a) **U.S. No. 1.** 1 percent allowed for defects.
- (b) **U.S. No. 2.** More than 1 but not more than 5 percent allowed for defects.
- (c) **U.S. No. 3.** More than 5 but not more than 10 percent allowed for defects.
- (d) **U.S. No. 4.** More than 10 but not more than 25 percent allowed for defects.
- (e) **U.S. No. 5.** More than 25 but not more than 50 percent allowed for defects.
- (f) **U.S. No. 6.** More than 50 but not more than 75 percent allowed for defects.
- (g) **U.S. No. 7.** More than 75 percent allowed for defects.

Size Classifications

§51.1328 Size Classifications.

Size shall be determined in inches and fractions thereof, in diameter and length for the following Whole Root Size Categories listed in Table I.

Table I – Whole Root Size Categories

Diameter (inches)	Length (inches)
Small: 3/16 to 3/8	Short: 1/4 to 3/4 Medium: Larger than 3/4 to 1-1/4 Long: Larger than 1-1/4
Medium: Larger than 3/8 to 5/8	Short: Up to 1-3/4 Medium: Larger than 1-3/4 to 2-1/2 Long: Larger than 2-1/2
Large: Larger than 5/8 to 7/8	Short: Up to 2-1/4 Medium: Larger than 2-1/4 to 2-3/4 Long: Larger than 2-3/4
Extra Large: Larger than 7/8	Short: Up to 2-1/4 Medium: Larger than 2-1/4 to 3 Long: Larger than 3

The following Size Classifications shall be reported in connection with the grade:

- (a) “Premium” is a lot consisting of more than 50 percent short ginseng of any category.
- (b) “Select” is a lot consisting of more than 70 percent short and medium ginseng of any category.
- (c) “Standard” is a lot consisting of more than 80 percent short, medium, and long ginseng of any category.

External Color

§51.1329 External Color.

“Color” shall be applied to the lot as a whole using the following terms:

- (a) “Light” means the color closest to “Light” on Visual Aid GIN. CC-1.
- (b) “Light Medium” means the color closest to “Light Medium” on Visual Aid GIN. CC-1.
- (c) “Medium” means the color closest to “Medium” on Visual Aid GIN. CC-1.
- (d) “Dark Medium” means the color closest to “Dark Medium” on Visual Aid GIN. CC-1.
- (e) “Dark” means the color closest to “Dark” on Visual Aid GIN. CC-1.

Texture

§51.1330 Texture.

“Texture” shall be applied to the lot as a whole using the following terms:

- (a) “Smooth” means the surface texture closest to “Smooth” on Visual Aid GIN. IDENT-1.
- (b) “Slight Wrinkle” means surface texture closest to “Slight Wrinkle” on Visual Aid GIN. IDENT-1.
- (c) “Wrinkle” means surface texture closest to “Wrinkle” on Visual Aid GIN. IDENT-1.

Sample and Sample Size

§51.1331 Sample and Sample Size.

Each sample shall be a minimum composite sample of at least 48 ounces or at least 1350 grams for any lot up to 1000 pounds, and at least an additional 48 ounces or at least 1350 grams for each additional 5000 pounds in the lot.

Size Classification Determination

§51.1332 Size Classification Determination

Separate whole roots from culls and foreign material, weigh and record. Clip or break off prongs and rootlets from whole roots, weigh and record. Sort whole roots into size categories (See §51.1327) by first separating whole roots into diameter categories (Small, Medium, Large, Extra Large). Further separate diameter categories into length categories (Short, Medium, Long), weigh and record. Divide by the total weight of the sample minus the culls and foreign material to calculate the percentage of each length category. Add together the length category percentages using the size classification definitions (See §51.1327 a, b, and c). Example: 19% Small Short, 23% Medium Short, and 10% Large Short totals 52%, making a Premium size lot.

Grade Determination

§51.1333 Grade Determination.

Weigh and record the external and internal defects and divide each by the total weight of the sample minus the prongs and rootlets to calculate the external defect percentage and internal defect percentage. Divide the external defect percentage by 2 (i.e., 6% would be recorded as 3%) to determine the External Defect Deduction. The internal deduction percentage is equal to the Internal Defects Deduction. Add the External and Internal Defects Deductions to calculate the Total Defect Percentage. The Total Defect Percentage will determine the grade of the lot (See §51.1326).

Definitions

§51.1334 Clean.

“Clean” means practically free from dirt or foreign material.

§51.1335 Well cured.

“Well cured” means well dried and brittle, and does not bend.

§51.1336 Prong.

“Prong” means a root or portion of a root growing off the main root. A prong cannot exceed more than one half the diameter of the main root.

§51.1337 Whole root.

“Whole root” means the main root or upper portion of the main root, including any portion growing off the main root that is too large to be a prong. Whole roots must have a tapered top or crown.

§51.1338 Rootlet.

“Rootlet” means small slender roots less than 1/8 inch in diameter.

§51.1339 Diameter.

“Diameter” means the greatest dimension at right angles to a line from the top of the whole root to the tip. Diameter shall not be measured at the point of attachment of a prong or the area where a prong was removed.

§51.1340 Length.

“Length” means the greatest dimension of the whole root measured in a straight line parallel to the longitudinal axis from the top of the whole root to the tip, not including any portion of the crown or rootlet, if present.

§51.1341 Defects.

“Defects” means any mechanical, pathological and/or physiological defect consisting of cuts, external discoloration, internal green or red discoloration, insect, mold, scab, or other means that affect the appearance or marketing quality of the whole root. In addition, when the cut area left by a clipped or removed prong exceeds one half of the diameter of the root, it shall be a defect.

§51.1342 Cull.

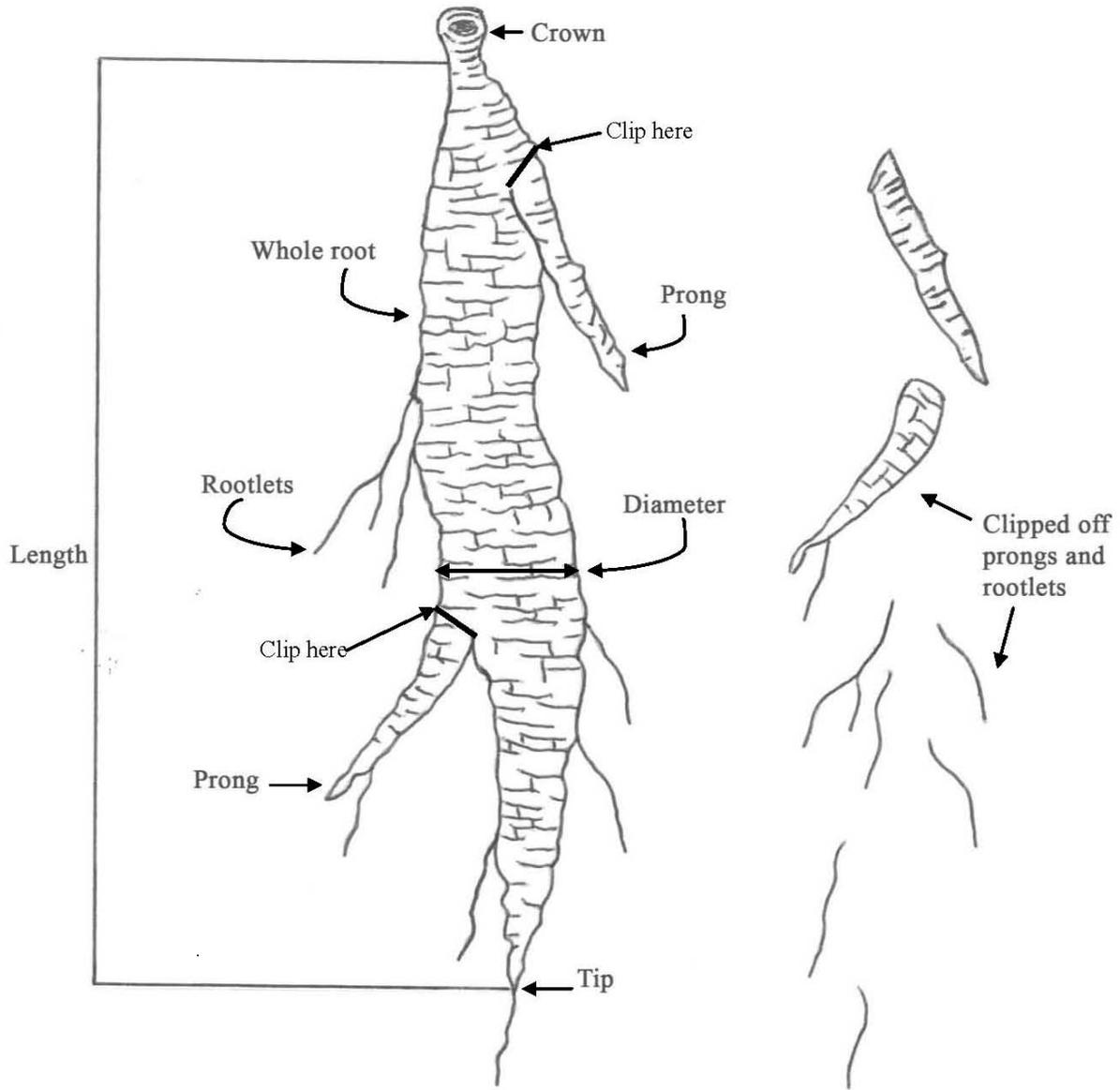
“Cull” means more than 50 percent of the whole root is unusable.

§51.1343 Origin.

“Origin” means the area (state and/or country) of production as determined by spectroscopy and photo luminescence or other scientifically approved test.

§51.1344 [Reserved].

Illustration Ginseng 1



Individual clipped areas (prongs) are not more than 50% of the diameter of the whole root.
Typically, rootlets will be removed or missing before grading.