



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Fresh
Products
Branch**

United States Standards for Grades of Gladiolus Corms (Bulbs)

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United States Standards for Grades of Gladiolus Corms (Bulbs) ¹

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§51.4240 General.

These standards apply to corms (bulbs) of the genus *Gladiolus* characteristically flattened in shape, consisting of solid corms (bulbs) propagated by a new corm which grows on top of the old corm (bulb) or by cormels (bulblets) which form between the old and new corms. (See Figure I)

§51.4241 Grades.

(a) "U.S. Fancy" consists of gladiolus corms which meet the following requirements:

(1) Basic requirements:

- (i) Mature and well cured;
- (ii) Well filled;
- (iii) Clean; and,
- (iv) Well trimmed.

(2) Free from:

- (i) Mold;
- (ii) Shattered corms;
- (iii) Thrips;
- (iv) Freezing;
- (v) Nut sedge;
- (vi) Grass roots;
- (vii) Rogues; and,
- (viii) Decay.

(3) Free from damage by any means.

(4) Size. See §51.4242

(5) Tolerances. See §51.4243

(b) "U.S. No. 1" consists of gladiolus corms which meet the requirements of U.S. Fancy, except for increased tolerances specified in §51.4243.

(c) "U.S. Fancy Mixture" consists of gladiolus corms which meet the requirements of U.S. Fancy,

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

except for rogues.

(d) "U.S. No. 1 Mixture" consists of gladiolus corms which meet the requirements of U.S. No. 1, except for rogues.

§51.4242 Size.

(a) The size of corms may be specified in connection with the grade in terms of minimum circumference, maximum circumference, minimum diameter, maximum diameter, or in accordance with one of the size designations given in Table I.

(b) Circumference or diameter means the greatest dimension of the corm at right angles to a line running from the stem to the center of the basal portion.

TABLE I

Size Designation	Diameter		Circumference	
	Minimum Inches	Maximum Inches	Minimum centimeters	Maximum centimeters
Jumbo.....	Over 1-3/4...	.....	Over 14.....	
1.....	1-1/2.....	1-3/4.....	12.....	14
2.....	1-1/4.....	1-1/2.....	10.....	12
3.....	1.....	1-1/4.....	8.....	10
4.....	3/4.....	1.....	6.....	8
5.....	1/2.....	3/4.....	4.....	6
6.....	1/4.....	1/2.....	2.....	4
7.....	.....	Under 1/4....	.....	Under 2
Large.....	1-1/4.....	1-3/4.....	10.....	14
Medium.....	3/4.....	1-1/4.....	6.....	10
Small.....	1/4.....	3/4.....	2.....	6

§51.4243 Tolerances.

In order to allow for variations incident to proper grading and handling, the tolerances, by count, given in Table II shall be permitted in any lot.

Table II

	U.S. Fancy (percent)	U.S. No. 1 (percent)
Total defects.....	6.....	10
Included in total defects:		
Internal defects.....	2.....	3
Rogues.....	2.....	4
Thirps.....	1.....	1
Nut sedge, grass roots, freezing, and decay	1/2 of 1.....	1/2 of 1

Not more than 10 percent of the corms in any lot may fail to meet a specified size, including therein not more than 5 percent for corms which fail to meet the specified minimum circumference or diameter.

§51.4244 Application of tolerances.

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 for the grade:

- (a) Individual samples may contain not more than double the tolerance specified.
- (b) One defective and one off-size specimen may be permitted in any package.
- (c) Packages containing 10 specimens or less are not restricted as to the percentage of defects, except 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.

§51.4245 Sample for grade and size determination.

Each sample shall consist of 50 corms, except when individual packages contain less than 50 corms the sample shall be the individual package.

§51.4246 Definitions.

"Mature and well cured" means corm is firm with a well-healed base scar and dry neck.

"Well filled" means compact and plump.

"Clean" means practically free from dirt and other foreign material.

"Fairly clean" means not materially caked with dirt or materially stained.

"Well trimmed" means tops are not more than 1 inch (2.5 cm) in length. New stem growth is not considered when determining trim.

"Fairly well trimmed" means tops are not more than 2 inches (5.1 cm) in length. New stem growth is not considered when determining trim.

"Rogues" means a distinctly different cultivars from that labeled for the entire lot. Corms of different cultivars usually vary in conformation and color.

"Shriveled" means a marked change in form, such as being shrunken, drawn or wrinkled.

"Soft" means gives readily to moderate pressure.

"Damage" means any specific defect described in §51.4247 -- Table III; or an equally

objectionable variation of any one of these defects, any other defect, or any combination of defects which materially detracts from the marketing quality of the corm.

"Serious damage" means any specific defect described in §51.4247 -- Table III; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects which seriously detracts from the marketing quality of the corm.

"Permanent defects" means defects which are not subject to change during shipment or storage, such as: cleanness, shape, trim.

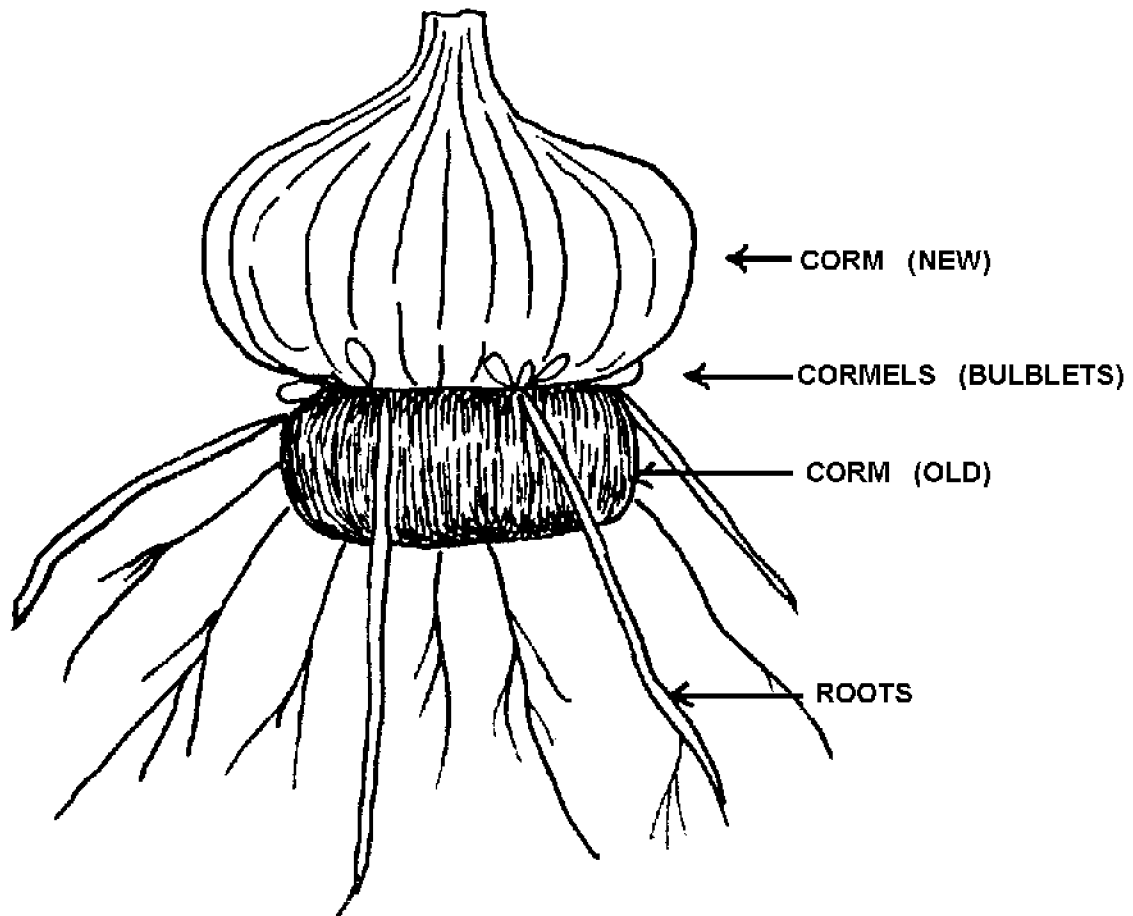
"Condition defects" means defects which are subject to change during shipment or storage, such as: shriveling, softness, decay.

§51.4247 Classification of defects.

TABLE III

Defects	Damage	Serious damage
Bacterial spot.....	Aggregating more than 3/8 inch (.9 cm) in diameter on a corm 1 inch (2.5 cm) in diameter and correspondingly lesser or greater areas on smaller or larger corms.	
Discoloration.....	Aggregating more than 3/8 inch (.9 cm) in diameter on a corm 1 inch (2.5 cm) in diameter and correspondingly lesser or greater areas on smaller or larger corms.	
Cuts.....	Aggregating more than 1/2 inch (1.3 cm) in length and 1/8 inch (.3 cm), in depth on a corm 1 inch (2.5 cm) in diameter, and correspondingly lesser or greater areas on smaller or larger corms.	
Bruises.....	Aggregating more than 3/4 inch (1.9 cm) in diameter and the area being soft or indented on a corm 1 inch (2.5 cm) in diameter and correspondingly lesser or greater areas on smaller or larger corms.	
Thirps.....	.....	When any feeding on the corm is evident or when thirps are present.
Nut sedge.....	.....	When present or penetrates the corm surface.
Grass roots.....	.....	When penetrating the corm surface.

Mold.....	.....	When affecting the incipient root system (living tissue) or when penetrates below the epidermis.
Shattered.....	.....	When corms are cracked, crushed, or split.
Freezing.....	.....	When corm is frozen or shows any amount of brown discoloration or is soft following freezing.
Decay.....	.....	Soft, mushy or mummified condition or disintegration or breakdown of the tissue of the corm.



GLADIOLUS CORMS (BULBS)

Illustration GLA 1