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# **United States Standards for Grades of Florida Grapefruit**

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# United States Standards for Grades of Florida Grapefruit

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### **Grades**

#### **§51.750 U.S. Fancy.**

"U.S. Fancy" consists of grapefruit which meet the following requirements:

(a) Basic requirements:

(1) Discoloration: Not more than one-tenth of the surface, in the aggregate, may be affected by discoloration. (See §51.770.);

(2) Firm;

(3) Mature;

(4) Similar varietal characteristics;

(5) Smooth texture;

(6) Well colored; and,

(7) Well formed.

(b) Free from:

(1) Ammoniation;

(2) Buckskin;

(3) Caked melanose;

(4) Decay;

(5) Scab;

(6) Sprayburn;

(7) Unhealed skin breaks; and,

(8) Wormy fruit.

(c) Free from injury caused by:

(1) Bruises;

(2) Green spots;

(3) Oil spots;

(4) Scale;

(5) Scars;

(6) Skin breakdown; and,

(7) Thorn scratches.

(d) Free from damage caused by:

(1) Dirt or other foreign material;

(2) Disease;

(3) Dryness or mushy condition;

(4) Hail;

(5) Insects;

(6) Sprouting;

(7) Sunburn; and,

(8) Other means.

(e) For tolerances see §51.760.

#### **§51.751 U.S. No. 1 Bright.**

The requirements for this grade are the same as for U.S. No. 1 except that fruit shall have not

more than one-fifth of its surface, in the aggregate, affected by discoloration. For tolerances see §51.760.

**§51.752 U.S. No. 1.**

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

(a) Basic requirements:

(1) Discoloration: Not more than one-third of the surface, in the aggregate, may be affected by discoloration. (See §51.770.);

(2) Fairly smooth texture;

(3) Fairly well colored;

(4) Firm;

(5) Mature;

(6) Similar varietal characteristics; and,

(7) Well formed.

(b) Free from:

(1) Decay;

(2) Unhealed skin breaks; and,

(3) Wormy fruit.

(c) Free from damage caused by:

(1) Ammoniation;

(2) Bruises;

(3) Buckskin;

(4) Caked melanose;

(5) Dirt or other foreign material;

(6) Disease;

(7) Dryness or mushy condition;

(8) Green spots;

(9) Hail;

(10) Insects;

(11) Oil spots;

(12) Scab;

(13) Scale;

(14) Scars;

(15) Skin breakdown;

(16) Sprayburn;

(17) Sprouting;

(18) Sunburn;

(19) Thorn scratches; and,

(20) Other means.

(d) For tolerances see §51.760.

**§51.753 U.S. No. 1 Golden.**

The requirements for this grade are the same as for U.S. No. 1 except that not more than 30 percent, by count, of the fruit shall have more than one-third of their surface, in the aggregate, affected by discoloration. For tolerances see §51.760.

**§51.754 U.S. No. 1 Bronze.**

The requirements for this grade are the same as for U.S. No. 1 except that at least 30 percent, by count, of the fruit shall have more than one-third of their surface, in the aggregate, affected by discoloration. The predominating discoloration on each of these fruits shall be of rust mite type. For tolerances see §51.760.

**§51.755 U.S. No. 1 Russet.**

The requirements for this grade are the same as for U.S. No. 1 except that at least 30 percent, by count, of the fruit shall have more than one-third of their surface, in the aggregate, affected by any type of discoloration. For tolerances see §51.760.

**§51.756 U.S. No. 2 Bright.**

The requirements for this grade are the same as for U.S. No. 2 except that fruit shall have not more than one-fifth of its surface, in the aggregate, affected by discoloration. For tolerances see §51.760.

**§51.757 U.S. No. 2.**

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

(a) Basic requirements:

(1) Discoloration: Not more than one-half of the surface, in the aggregate, may be affected by discoloration. (See §51.770.);

(2) Fairly firm;

(3) Mature;

(4) Similar varietal characteristics;

(5) Slightly colored;

(6) Not more than slightly misshapen; and,

(7) Not more than slightly rough texture.

(b) Free from:

(1) Decay;

(2) Unhealed skin breaks; and,

(3) Wormy fruit.

(c) Free from serious damage caused by:

(1) Ammoniation;

(2) Bruises;

(3) Buckskin;

(4) Caked melanose;

(5) Dirt or other foreign material;

(6) Disease;

(7) Dryness or mushy condition;

(8) Green spots;

(9) Hail;

(10) Insects;

(11) Oil spots;

(12) Scab;

(13) Scale;

(14) Scars;

- (15) Skin breakdown;
- (16) Sprayburn;
- (17) Sprouting;
- (18) Sunburn;
- (19) Thorn scratches; and,
- (20) Other means.
- (d) For tolerances see §51.760.

**§51.758 U.S. No. 2 Russet.**

The requirements for this grade are the same as for U.S. No. 2 except that at least 10 percent of the fruit shall have more than one-half of their surface, in the aggregate, affected by any type of discoloration. For tolerances see §51.760.

**§51.759 U.S. No. 3.**

"U.S. No. 3" consists of grapefruit which meet the following requirements:

- (a) Basic requirements:
  - (1) Mature;
  - (2) Misshapen;
  - (3) Poorly colored;
  - (4) Rough texture, not seriously bumpy;
  - (5) Similar varietal characteristics; and,
  - (6) Slightly spongy.
- (b) Free from:
  - (1) Decay;
  - (2) Unhealed skin breaks; and,
  - (3) Wormy fruit.
- (c) Free from very serious damage caused by:
  - (1) Ammoniation;
  - (2) Bruises;
  - (3) Buckskin;
  - (4) Caked melanose;
  - (5) Disease;
  - (6) Dryness or mushy condition;
  - (7) Hail;
  - (8) Insects;
  - (9) Oil spotting;
  - (10) Scab;
  - (11) Scale;
  - (12) Scars;
  - (13) Skin breakdown;
  - (14) Sprayburn;
  - (15) Sprouting;
  - (16) Sunburn; and,
  - (17) Other means.
- (d) For tolerances see §51.760.

## **Tolerances**

### **§51.760 Tolerances.**

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by count, based on a minimum 25 count sample, are provided as specified:

#### **(a) Defects.**

**(1) U.S. Fancy, U.S. No. 1 Bright, U.S. No. 1, U.S. No. 1 Golden, U.S. No. 1 Bronze, U.S. No. 1 Russet, U.S. No. 2 Bright, U.S. No. 2, and U.S. No. 2 Russet.**

**(i) For defects at shipping point<sup>1</sup>.** Not more than 10 percent of the fruit in any lot may fail to meet the requirements of the specified grade: **Provided**, that included in this amount not more than 5 percent shall be allowed for defects causing very serious damage, including in this latter amount not more than 1 percent for decay or wormy fruit.

**(ii) For defects en route or at destination.** Not more than 12 percent of the fruit which fail to meet the requirements of the specified grade: **Provided**, that included in this amount not more than the following percentages shall be allowed for defects listed:

**(A)** 10 percent for fruit having permanent defects; or,

**(B)** 7 percent for defects causing very serious damage, including therein not more than 5 percent for very serious damage by permanent defects and not more than 3 percent for decay or wormy fruit.

**(2) U.S. No. 3.**

**(i) For defects at shipping point<sup>1</sup>.** Not more than 10 percent of the fruit in any lot may fail to meet the requirements of the grade: **Provided**, that included in this amount not more than 1 percent shall be for decay or wormy fruit.

**(ii) For defects en route or at destination.** Not more than 12 percent of the fruit which fail to meet the requirements of the grade: **Provided**, that included in this amount not more than the following percentages shall be allowed for defects listed:

**(A)** 10 percent for fruit having permanent defects; or,

**(B)** 3 percent for decay or wormy fruit.

#### **(b) Discoloration.**

**(1) U.S. No. 1 Bright, U.S. No. 1, U.S. No. 2 Bright, and U.S. No. 2.** Not more than 10 percent of the fruit in any lot may fail to meet the requirements relating to discoloration as specified in each grade. No sample may have more than 20 percent of the fruit with excessive discoloration: **And provided further**, that the entire lot averages within percentage specified.

**(2) U.S. No. 1 Golden.** Not more than 30 percent of the fruit shall have in excess of one-third of their surface, in the aggregate, affected by discoloration, and no part of any tolerance shall be allowed to increase this percentage. No sample may have more than 40 percent of the fruit with excessive discoloration: **And provided further**, that the entire lot averages within the percentage specified.

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<sup>1</sup>Shipping point, as used in these standards, means the point of origin of the shipment in the producing area or at port of loading for ship stores or overseas shipment, or, in the case of shipments from outside the continental United States, the port of entry into the United States.

(3) **U.S. No. 1 Bronze, and U.S. No. 1 Russet.** At least 30 percent of the fruit shall have in excess of one-third of the surface, in the aggregate, affected by discoloration, and no part of any tolerance shall be allowed to reduce this percentage. No sample may have less than 20 percent of the fruit with required discoloration: **And provided further**, that the entire lot averages within the percentage specified.

(4) **U.S. No. 2 Russet.** At least 10 percent of the fruit shall have in excess of one-half of the surface, in the aggregate, affected by discoloration, and no part of any tolerance shall be allowed to reduce this percentage: **And provided further**, that the entire lot averages within the percentage specified.

#### **Application of Tolerances**

##### **§51.761 Application of tolerances.**

Individual samples are subject to the following limitations, unless otherwise specified in §51.760. Individual samples shall have not more than one and one-half times a specified tolerance of 10 percent or more, and not more than double a specified tolerance of less than 10 percent: **Provided**, that at least one decayed or wormy fruit may be permitted in any sample: **And provided further**, that the averages for the entire lot are within the tolerances specified for the grade.

#### **Size**

##### **§51.762 Size.**

(a) Fruits shall be fairly uniform in size and shall be packed in containers according to approved and recognized methods.

(b) "Fairly uniform in size" means that not more than 10 percent of the grapefruit per sample may vary more than one-half inch in diameter.

(c) In order to allow for variations incident to proper sizing, not more than 10 percent of the samples in any lot may fail to meet the requirements of size.

#### **Definitions**

##### **§51.763 Similar varietal characteristics.**

"Similar varietal characteristics" means that the fruits in any container are similar in color and shape.

##### **§51.764 Well colored.**

"Well colored" means that the fruit has characteristic color for the variety with practically no trace of green color.

##### **§51.765 Firm.**

"Firm" means that the fruit is not soft, or noticeably wilted or flabby, and the skin is not spongy or puffy.

##### **§51.766 Well formed.**

"Well formed" means that the fruit has the shape characteristic of the variety.

##### **§51.767 Mature.**

"Mature" shall have the same meaning assigned the term in the Florida Citrus Code, Chapter 601, 1995 Edition, and the Official Rules Affecting the Florida Citrus Industry, in effect as of February 12, 1995. These grapefruit maturity requirements are contained in the Florida Citrus Code, Chapter 601, Florida Statutes, Sections 601.16, 601.17, and 601.18, 1995 Edition, and the State of Florida Department of Citrus Official Rules Affecting the Florida Citrus Industry, Part 1,



Chapter 20-13 Market Classification, Maturity Standards and Processing or Packing Restrictions for Hybrids in effect as of February 12, 1995. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from, Florida Department of Citrus, Post Office Box 148, Lakeland, Florida 33802 or copies of both regulations may be inspected at USDA, AMS, F&VD, FPB, Standardization Section, Room 2065-S, 14th and Independence Ave., Washington, DC 20250 or at the Office of the Federal Register, Suite 700, 800 North Capitol Street, Washington, DC.

**§51.768 Smooth texture.**

"Smooth texture" means that the skin is thin and smooth for the variety and size of the fruit.

"Thin" means that the skin thickness does not average more than 3/8 inch (9.5 mm), on a central cross section, on grapefruit 4-1/8 inches (104.8 mm) in diameter.

**§51.769 Injury.**

"Injury" means any specific defect described in §51.784, Table I; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which slightly detracts from the appearance, or the edible or marketing quality of the fruit.

**§51.770 Discoloration.**

"Discoloration" means russetting of a light shade of golden brown caused by rust mite or other means. Lighter shades of discoloration caused by smooth or fairly smooth superficial scars or other means may be allowed on a greater area, or darker shades may be allowed on a lesser area, provided no discoloration caused by speck-type melanose or other means may detract from the appearance of the fruit to a greater extent than the shade and amount of discoloration allowed in the grade.

**§51.771 Fairly well colored.**

"Fairly well colored" means that except for an aggregate area of green color which does not exceed the area of a circle 1 inch (25.4 mm) in diameter, the characteristic color predominates over the green color.

**§51.772 Fairly smooth texture.**

"Fairly smooth texture" means that the skin is fairly thin and not coarse for the variety and size of the fruit. "Fairly thin" means that the skin thickness does not average more than 1/2 inch (12.7 mm), on a grapefruit 4-1/8 inches (104.8 mm) in diameter.

**§51.773 Damage.**

"Damage" means any specific defect described in §51.784, Table I; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the fruit.

**§51.774 Fairly firm.**

"Fairly firm" means that the fruit may be slightly soft, but not bruised, and the skin is not spongy or puffy.

**§51.775 Slightly misshapen.**

"Slightly misshapen" means that the fruit has fairly good shape characteristic of the variety and is not more than slightly elongated or pointed or otherwise deformed.

**§51.776 Slightly rough texture.**

"Slightly rough texture" means that the skin may be slightly thick but not excessively thick, materially ridged or grooved. "Slightly thick" means that the skin thickness does not average

more than 5/8 inch (15.9 mm), on a central cross section, on a grapefruit 4-1/8 inches (104.8 mm) in diameter.

**§51.777 Serious damage.**

"Serious damage" means any specific defect described in §51.784, Table I; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the fruit.

**§51.778 Slightly colored.**

"Slightly colored" means that except for an aggregate area of green color which does not exceed the area of a circle 2 inches (50.8 mm) in diameter, the fruit surface shows some characteristic color.

**§51.779 Poorly colored.**

"Poorly colored" means that not more than 25 percent of the surface may be of a solid dark green color.

**§51.780 Misshapen.**

"Misshapen" means that the fruit is decidedly elongated, pointed, or flatsided.

**§51.781 Slightly spongy.**

"Slightly spongy" means that the fruit is puffy or slightly wilted but not flabby.

**§51.782 Very serious damage.**

"Very serious damage" means any specific defect described in §51.784, Table I; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which very seriously detracts from the appearance, or the edible or marketing quality of the fruit.

**§51.783 Diameter.**

"Diameter" means the greatest dimension measured at right angles to a line from stem to blossom end.

**§51.784 Classification of defects.**

**Table I**

<b>Factor</b>	<b>Injury</b>	<b>Damage</b>	<b>Serious Damage</b>	<b>Very Serious Damage</b>
Ammoniation		Not occurring as light speck type.	Scars are cracked or dark and aggregating more than a circle 1 inch (25.4 mm) in diameter.	Aggregating more than 25 percent of the surface.
Bruises	Segment walls are collapsed, or rag is ruptured and juice sacs are ruptured.	Segment walls are collapsed, or rag is ruptured and juice sacs are ruptured.	Segment walls are collapsed, or rag is ruptured and juice sacs are ruptured.	Fruit is split open, peel is badly watersoaked, or rag is ruptured and juice sacs are ruptured causing a mushy condition affecting all segments more than 3/4 inch (19.1 mm) at bruised area or the equivalent of this amount, by volume, when affecting more than one area on the fruit.
Buckskin		Aggregating more than a circle 1-1/4 inches (31.8 mm) in diameter.	Aggregating more than 25 percent of the surface.	Aggregating more than 50 percent of the surface.
Caked melanose		Aggregating more than a circle 3/4 inch (19.1 mm) in diameter.	Aggregating more than a circle 1 inch (25.4 mm) in diameter.	Aggregating more than 25 percent of the surface.
Dryness or mushy condition		Affecting all segments more than 1/4 inch (6.4 mm) at stem end, or the equivalent of this amount, by volume, when occurring in other portions of the fruit.	Affecting all segments more than 1/2 inch (12.7 mm) at stem end, or the equivalent of this amount, by volume, when occurring in other portions of the fruit.	Affecting all segments more than 3/4 inch (19.1 mm) at stem end, or the equivalent of this amount, by volume, when occurring in other portions of the fruit.

Green spots	Aggregating more than a circle 1/2 inch (12.7 mm) in diameter, caused by scale.	Aggregating more than a circle 3/4 inch (19.1 mm) in diameter, caused by scale.	Aggregating more than a circle 1 inch (25.4 mm) in diameter, caused by scale.	Aggregating more than 1/3 of the surface, caused by scale.
Oil spots	Aggregating more than a circle 1/2 inch (12.7 mm) in diameter.	Aggregating more than a circle 1 inch (25.4 mm) in diameter.	Aggregating more than a circle 1-1/2 inches (38.1 mm) in diameter.	Aggregating more than 1/3 of the surface.
Scab		Materially detracts from the shape or texture, or aggregating more than a circle 3/4 inch (19.1 mm) in diameter.	Seriously detracts from the shape or texture, or aggregating more than a circle 7/8 inch (22.2 mm) in diameter.	Aggregating more than 25 percent of the surface.
Scale	More than a few adjacent to the "button" at the stem end, or more than 6 scattered on other portions of the fruit.	Blotch aggregating more than a circle 3/4 inch (19.1 mm) in diameter, or occurring as a ring more than a circle 1-1/4 inches (31.8 mm) in diameter.	Blotch aggregating more than a circle 1 inch (25.4 mm) in diameter, or occurring as a ring more than a circle 1-1/2 inches (38.1 mm) in diameter.	Aggregating more than 25 percent of the surface.
Scars, Hail, or Thorn scratches  <b>[For smooth or fairly smooth superficial scars see §51.770.]</b>	Depressed, not smooth, or detracts from appearance more than the amount of discoloration permitted in the grade.	Very deep or very rough aggregating more than a circle 1/2 inch (12.7 mm) in diameter; deep or rough aggregating more than a circle 1 inch (25.4 mm) in diameter; slightly rough or of slight depth aggregating more than 10 percent of fruit surface.	Very deep or very rough aggregating more than a circle 1 inch (25.4 mm) in diameter; deep or rough aggregating more than 5 percent of fruit surface; slight depth or slightly rough aggregating more than 15 percent of fruit surface.	Very deep or very rough or unsightly that appearance is very seriously affected.

Skin breakdown	Aggregating more than a circle 3/8 inch (9.5 mm) in diameter.	Aggregating more than a circle 3/4 inch (19.1 mm) in diameter.	Aggregating more than a circle 1 inch (25.4 mm) in diameter.	Aggregating more than 25 percent of the surface.
Sprayburn		Aggregating more than a circle 3/4 inch (19.1 mm) in diameter.	Hard and aggregating more than a circle 1-1/2 inches (38.1 mm) in diameter.	Aggregating more than 25 percent of the surface.
Sprouting		More than six seeds have sprouts of more than 1/4 inch (6.4 mm) in length, or more than 3 seeds with sprouts over 3/4 inch (19.1 mm) in length.	More than six seeds have sprouts of more than 1/2 inch (12.7 mm) in length, or more than 3 seeds with sprouts over 1 inch (25.4 mm) in length.	More than six seeds have sprouts of more than 3/4 inch (19.1 mm) in length, or more than 3 seeds with sprouts over 1-1/4 inches (31.8 mm) in length.
Sunburn		Skin is flattened, dry, darkened, or hard and the affected area exceeds 25 percent of the surface.	Skin is hard and affects more than one-third of the surface.	Aggregating more than 50 percent of the surface.

Note: All references to area or aggregating area, or length in this standard are based on a grapefruit 4-1/8 inches (104.8 mm) in diameter, allowing proportionately greater areas on larger fruit and lesser areas on smaller fruit.