



**United States
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Agriculture**

**Agricultural
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Service**

**Fruit and
Vegetable
Programs**

**Fresh
Products
Branch**

United States Standards for Grades of Tangerines

Effective December 27, 1999

United States Standards for Grades of Tangerines ¹

51.1770 [Reserved].

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¹ Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State or laws and regulations.

§51.1770 [Reserved].

Grades

§51.1771 U.S. Fancy.

U.S. Fancy shall consist of tangerines which are mature, firm, and well formed; free from unhealed skin breaks, dryness or mushy condition, hard or dry skins and decay; free from injury caused by ammoniation, bruising, creasing, green spots or oil spots, skin breakdown, scale, sprouting, sprayburn, and sunburn, and free from damage caused by buckskin, melanose, scars, scab, dirt or other foreign materials, disease, insects, mechanical or other means.

(a) Each fruit of this grade shall be well colored.

(b) In this grade not more than 1/10 of the surface in the aggregate of each fruit may have a light shade of brown discoloration caused by rust mite, or an equivalent in appearance to this amount when the fruit is discolored by any cause. (See §51.1778)

§51.1772 U.S. No. 1.

U.S. No. 1 shall consist of tangerines which are mature, firm, and well formed; free from unhealed skin breaks, hard or dry skins, and decay; free from damage by ammoniation, bruising, creasing, dryness or mushy condition, green spots or oil spots, skin breakdown, scale, sprouting, sprayburn, sunburn, buckskin, melanose, scars, scab, dirt or other foreign materials, disease, insects, mechanical or other means.

(a) Each fruit of this grade shall be fairly well colored.

(b) In this grade not more than one-third of the surface in the aggregate of each fruit may have a light shade of brown discoloration caused by rust mite, or an equivalent in appearance to this amount when the fruit is discolored by any cause. (See §51.1778)

§51.1773 U.S. No. 1 Bronze.

The requirements for this grade are the same as for U.S. No. 1 except for discoloration. In this grade at least 75 percent, by count, of the fruit shall show some discoloration, and more than 20 percent, by count, of the fruit shall have more than one-third of the surface of each fruit affected with bronzed russeting: **Provided**, That no discoloration that exceeds the amount allowed in the U.S. No. 1 grade shall be permitted unless such discoloration is caused by thrip or wind scars, or rust mite. (See §51.1778)

§51.1774 U.S. Combination.

U.S. Combination consists of a combination of U.S. No. 1 and U.S. No. 2 tangerines: **Provided**, That at least 40 percent, by count, of the tangerines in each lot shall meet the requirements of the U.S. No. 1 grade. (See §51.1781)

§51.1775 U.S. No. 2.

U.S. No. 2 shall consist of tangerines which are mature, fairly firm, and fairly well-formed; free from unhealed skin breaks, hard or dry skins, and decay; free from serious damage by ammoniation, bruising, creasing, dryness or mushy condition, green spots or oil spots, skin breakdown, scale, sprouting, sprayburn, sunburn, buckskin, melanose, scars, scab, dirt or other foreign materials, disease, insects, mechanical or other means.

(a) Each fruit of this grade shall be reasonably well colored.

(b) In this grade not more than two-thirds of the surface in the aggregate of each fruit may be affected with light brown discoloration, or may have the equivalent to this amount in appearance when the fruit has lighter or darker shades of discoloration. (See §51.1778)

§51.1776 U.S. No. 2 Russet.

The requirements for this grade are the same as for U.S. No. 2 except that more than 20 percent, by count, of the fruits shall have in excess of two-thirds of the surface in the aggregate affected with light brown discoloration. (See §51.1778)

§51.1777 U.S. No. 3.

U.S. No. 3 shall consist of tangerines which are mature, not flabby and not seriously lumpy; which are free from unhealed skin breaks, hard or dry skins, and decay; free from very serious damage by bruises, ammoniation, creasing, dryness or mushy condition, oil spots or green spots, skin breakdown, scale, sprouting, sprayburn, sunburn, buckskin, melanose, scars, scab, dirt or other foreign materials, disease, insects, mechanical or other means. (See §51.1780)

Tolerances

§51.1778 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the tolerances, by count, based on a minimum 25 count sample, set forth in the U.S. Fancy, U.S. No. 1, U.S. No. 1 Bronze, U.S. Combination, U.S. No. 2, U.S. No. 2 Russet, and U.S. No. 3 are provided as specified.

§51.1779 U.S. Fancy; U.S. No. 1; U.S. No. 1 Bronze; U.S. No. 2 and U.S. No. 2 Russet.

For defects at shipping point. Not more than 10 percent, by count, of the tangerines in any lot may fail to meet the requirements relating to discoloration. In addition, not more than 10 percent, by count, of the tangerines in any lot may fail to meet the remaining requirements of the specified grade, included in this amount not more than 5 percent shall be allowed for defects causing very serious damage, included in this latter amount not more than 1 percent for decay.

For defects en route or at destination. Not more than 10 percent, by count, of the tangerines in any lot may fail to meet the requirements relating to discoloration. In addition, not more than 12 percent, by count, of the tangerines in any lot may fail to meet the remaining requirements of the specified grade: **Provided**, that included in this amount not more than the following percentages shall be allowed for defects listed: 10 percent for fruit having permanent defects; or 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.

§51.1780 U.S. No. 3.

For defects at shipping point. Not more than 10 percent, by count, of the tangerines in any lot may fail to meet the requirements of the specified grade, included in this amount not more than 1 percent for decay.

For defects en route or at destination. Not more than 12 percent, by count, of the tangerines in any lot may fail to meet the remaining requirements of the specified grade: **Provided**, that included in this amount not more than the following percentages shall be allowed for defects listed: 10 percent for fruit having permanent defects; or not more than 3 percent for decay.

§51.1781 U.S. Combination.

For defects at shipping point. Not more than 10 percent, by count, of the tangerines in any lot may fail to meet the requirements of the U.S. No. 2 grade relating to discoloration. In addition, not more than 10 percent, by count, of the tangerines in any lot may fail to meet the remaining requirements of the U.S. No. 2 grade, included in this amount not more than 5 percent for very serious damage, included in this latter amount not more than 1 percent for decay.

For defects en route or at destination. Not more than 10 percent, by count, of the tangerines in

any lot may fail to meet the requirements of the U.S. No. 2 grade relating to discoloration. In addition, not more than 12 percent, by count, of the tangerines in any lot may fail to meet the remaining requirements of the U.S. No. 2 grade: **Provided**, that included in this amount not more than the following percentages shall be allowed for defects listed: 10 percent for fruit having permanent defects; or 7 percent for defects causing very serious damage, including therein not more than 5 percent for very serious damage by permanent defects, included in the latter amount not more than 3 percent for decay.

For defects at shipping point and en route or at destination. No part of any tolerance shall be allowed to reduce for the lot as a whole, the 40 percent of U.S. No. 1 tangerines required in the U.S. Combination grade, but individual samples may have not less than 30 percent of U.S. No. 1 required: **Provided**, That the entire lot averages within the percentage required.

Application of Tolerances

§51.1782 Application of Tolerances.

Individual samples, based on a minimum 25 count sample, are subject to the following limitations, unless otherwise specified. 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 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.

Standard Pack

§51.1783 Standard pack.

(a) The tangerines in each container shall be packed in accordance with recognized methods. Each container shall be well filled and properly marked to indicate the size of the fruit. When the figures used to indicate size of the fruit vary from the actual number of tangerines in the container, as in the case of fractional parts of boxes, the figures indicating size shall be followed by the letter "s" or the word "size," as, for example, "210s," or "210 size." Containers which are not so marked shall not be regarded as meeting requirements of "standard pack."

(b) Fruit in each sample shall be of a size not less than the minimum diameters specified below for the various packs. Packs other than those listed shall have a minimum size not less than specified for the nearest count.

Pack	Diameter in Inches	Minimum
100.....		2-15/16
120.....		2-11/16
150.....		2-8/16
176.....		2-6/16
210.....		2-4/16
246.....		2-2/16
294.....		2

(c) In order to allow for variations incident to proper sizing, not more than 10 percent, by count, of the fruit in any sample may be below the minimum size for the count as specified above.

Definitions

§51.1784 Firm.

"Firm" means that the flesh is not soft and the fruit is not badly puffy, and that the skin has not become materially separated from the flesh of the tangerine.

§51.1785 Well formed.

"Well formed" means that the fruit has the characteristic tangerine shape and is not deformed.

§51.1786 Injury.

"Injury" means any defect which more than slightly affects the appearance, or edible or shipping quality of the fruit. 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 injury:

- (a) Ammoniation which does not occur as light speck type.
- (b) Creasing which is more than barely visible, or which extends over more than 20 percent of the fruit surface.
- (c) Green spots or oil spots (oleocellosis or similar injuries) which are depressed or soft, or which have an aggregate area of a circle more than 3/8 inch in diameter, or which are green and more than 4 in number.
- (d) Skin breakdown when exceeding that of a circle 1/8 inch in diameter.
- (e) Sprayburn when causing the skin to become hard, or when aggregating more than a circle 3/8 inch in diameter.
- (f) Sunburn when causing the skin to become hard and affecting more than 10 percent of the fruit surface.
- (g) Scale when medium or large and more than 4 are present.
- (h) Bruising when segment walls are collapsed, or albedo is ruptured and juice sacs are ruptured.

§51.1787 Damage.

"Damage" means any defect or blemish which more than slightly affects the appearance, or edible or shipping quality of the fruit. 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) Ammoniation, when not occurring as light speck type, or which occurs as small, thinly scattered spots over more than 10 percent of the fruit surface, or as solid scarring which aggregates more than one-fourth of an inch in diameter.
- (b) Creasing, when it materially weakens the skin, or extends over more than one-third of the fruit surface.
- (c) Dryness or mushy condition when affecting all segments more than one-eighth inch at stem end, or the equivalent of this amount, by volume, when occurring in other portions of the fruit.
- (d) Green spots or oil spots (oleocellosis) or similar injuries which are depressed or soft, or which have an aggregate area of more than 5 percent of the fruit surface, or which are green and more than 10 in number.
- (e) Skin breakdown when aggregating more than a circle 1/4 inch in diameter.
- (f) Scale, when occurring as a blotch which averages more than three-eighths inch in diameter or any scale that detracts from the appearance of the individual fruit to a greater extent than a three-eighths inch blotch. "Blotch" refers to actual scale and not the discolored area caused by scale.
- (g) Sprayburn, when causing the skin to become hard, or when aggregating more than 5 percent

of the fruit surface.

(h) Sunburn, when causing the skin to become hard and affecting more than 5 percent of the fruit surface.

(i) Bruising when segment walls are collapsed, or albedo and juice sacs are ruptured.

(j) Buckskin when aggregating more than 5 percent of the fruit surface.

(k) Melanose, when not small smooth speck-type, or any speck-type that detracts from the appearance of the fruit to a greater extent than the amount of discoloration allowed in the grade. Melanose that exceeds the amount allowed in the U.S. No. 1 grade is not permitted in the U.S. No. 1 Bronze grade.

(l) Scars, when deep or rough aggregating more than a circle 1/4 inch in diameter; slightly rough with slight depth aggregating more than a circle 3/4 inch in diameter; smooth or fairly smooth with slight depth aggregating more than a circle 1-1/8 inches in diameter.

(m) Scab, when it materially detracts from the shape or texture, or aggregates more than 5 percent of the fruit surface.

§51.1788 Well colored.

"Well colored" means that the ground color of each fruit is a deep tangerine color with practically no trace of yellow color.

§51.1789 Discoloration.

"Discoloration" includes discoloration caused by rust mite, melanose, scars, scab, or any other means. Shades of discoloration which blend with the ground color of the fruit may be allowed on a larger area than that specified in the grade for light brown discoloration, and shades of discoloration which are more in contrast with the ground color shall be restricted to a lesser area, provided no discoloration may affect the appearance to a greater extent than the amount of light brown discoloration specified for the grade. Tangerines which show discoloration caused by melanose, scab, or any cause other than by thrip, or wind scars, or by rust mite shall not be permitted in the U.S. No. 1 Bronze grade when such discoloration exceeds the amount allowed in the U.S. No. 1 grade. (See §51.1790)

§51.1790 Fairly well colored.

"Fairly well colored" means that each fruit may have not over one inch of green color in the aggregate and the remainder of the surface shall show a good tangerine color with some portion of the surface showing a reddish tangerine blush.

§51.1791 Bronzed russeting.

"Bronzed russeting" means russeting caused by thrip, or wind scars, or by rust mite or similar russeting which is not readily distinguishable from that caused by rust mite. Discolorations caused by melanose, scab, etc., are not considered as "bronzed russeting" within the meaning of these standards but are regarded as defects when they exceed the amounts permitted in the U.S. No. 1 grade and are not permitted in the U.S. No. 1 Bronze grade.

§51.1792 Fairly firm.

"Fairly firm" means that the flesh may be slightly soft but is not bruised or badly puffy, and that the skin has not become seriously separated from the flesh of the tangerine.

§51.1793 Fairly well formed.

"Fairly well formed" means that the fruit may not have the shape characteristic of the variety but that it is not badly deformed.

§51.1794 Serious damage.

"Serious damage" means any defect or blemish which seriously affects the appearance, or edible or shipping quality of the fruit. 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) Ammoniation, when scars are cracked, or dark and aggregating more than one-half inch in diameter or when light-colored and aggregating more than 1 inch in diameter.
- (b) Creasing, when it seriously weakens the skin, or extends over more than one-half of the fruit surface.
- (c) Bruising when segment walls are collapsed, or albedo and juice sacs are ruptured.
- (d) Dryness or mushy condition when affecting all segments more than one-quarter inch at stem end, or the equivalent of this amount, by volume, when occurring in other portions of the fruit.
- (e) Green spots or oil spots (oleocellosis) or similar injuries which are depressed or soft, or which have an aggregate area of more than 10 percent of the fruit surface.
- (f) Skin breakdown, when aggregating more than a circle 5/8 inch in diameter.
- (g) Scale, when occurring as a blotch which averages more than one-half inch in diameter, or any scale that detracts from the appearance of the fruit to a greater extent than a one-half inch blotch. "Blotch" refers to actual scale and not the discoloration caused by scale.
- (h) Sprayburn, when causing the skin to become hard, or when aggregating more than 10 percent of the fruit surface.
- (i) Sunburn, when causing the skin to become hard and affecting more than 10 percent of the fruit surface.
- (j) Buckskin when aggregating more than 10 percent of the fruit surface.
- (k) Melanose, when badly caked and aggregating more than 1/2 inch in diameter or when lightly caked and aggregating more than 1 inch in diameter, or when unsightly or when it detracts from the appearance of the fruit to a greater extent than the amount of discoloration allowed for the grade.
- (l) Scars, when deep or rough aggregating more than a circle 1/2 inch in diameter; slightly rough with slight depth aggregating more than a circle 1-1/8 inches in diameter; smooth or fairly smooth with slight depth aggregating more than 10 percent of the fruit surface.
- (m) Scab, when it materially detracts from the shape or texture, or aggregates more than 10 percent of the fruit surface.

§51.1795 Reasonably well colored.

"Reasonably well colored" means that a good yellow or reddish tangerine color shall predominate over the green color on at least one-half of the fruit surface in the aggregate, and that each fruit shall show practically no lemon color.

§51.1796 Very serious damage.

"Very serious damage" means any defect or blemish which very seriously affects the appearance, or edible or shipping quality of the fruit. 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 very serious damage:

- (a) Ammoniation, when scars are badly cracked, or when dark and aggregating more than 1 inch in diameter, or when light-colored and detracting from the appearance of the fruit to a greater extent than 1 inch of dark ammoniation.
- (b) Creasing, when it very seriously weakens the skin, or extends over practically entire fruit surface.
- (c) Dryness or mushy condition when affecting all segments more than one-half inch at stem end, or the equivalent of this amount, by volume, when occurring in other portions of the fruit.
- (d) Skin breakdown, when aggregating more than 25 percent of the fruit surface.
- (e) Scale, when aggregating more 25 percent of the fruit surface.
- (f) Sprayburn, when aggregating more than 25 percent of the fruit surface.
- (g) Sunburn, when aggregating more than 25 percent of the fruit surface.
- (h) Melanose, when caked to the extent that the appearance of the fruit is very seriously affected.
- (i) Scars, when so deep, rough, or so unsightly that the appearance of the fruit is very seriously injured.
- (j) Buckskin, when aggregating more than 25 percent of the fruit surface.
- (k) Scab, when aggregating more than 25 percent of fruit surface.
- (l) Green spots or oil spots, when the appearance aggregates more than 25 percent of the fruit surface.
- (m) Bruising when fruit has been split open, peel is badly watersoaked following bruising or albedo and juice sacs are ruptured causing a mushy condition affecting all segments more than 1/2 inch at bruised area or the equivalent of this amount, by volume, when affecting more than one area on the fruit.

§51.1797 Cull.

A cull is a fruit which does not meet the requirements of U.S. No. 3 grade.

Note: All references in this standard to area, aggregating area, or length are based on a tangerine 2-1/2 inches in diameter, allowing proportionately greater areas on larger fruit and lesser areas on smaller fruit.