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Agricultural
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Fruit and
Vegetable
Division

Fresh Products
Branch

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Bunched and Topped Carrots and CARROTS WITH SHORT TRIMMED TOPS

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MARKET INSPECTION INSTRUCTIONS

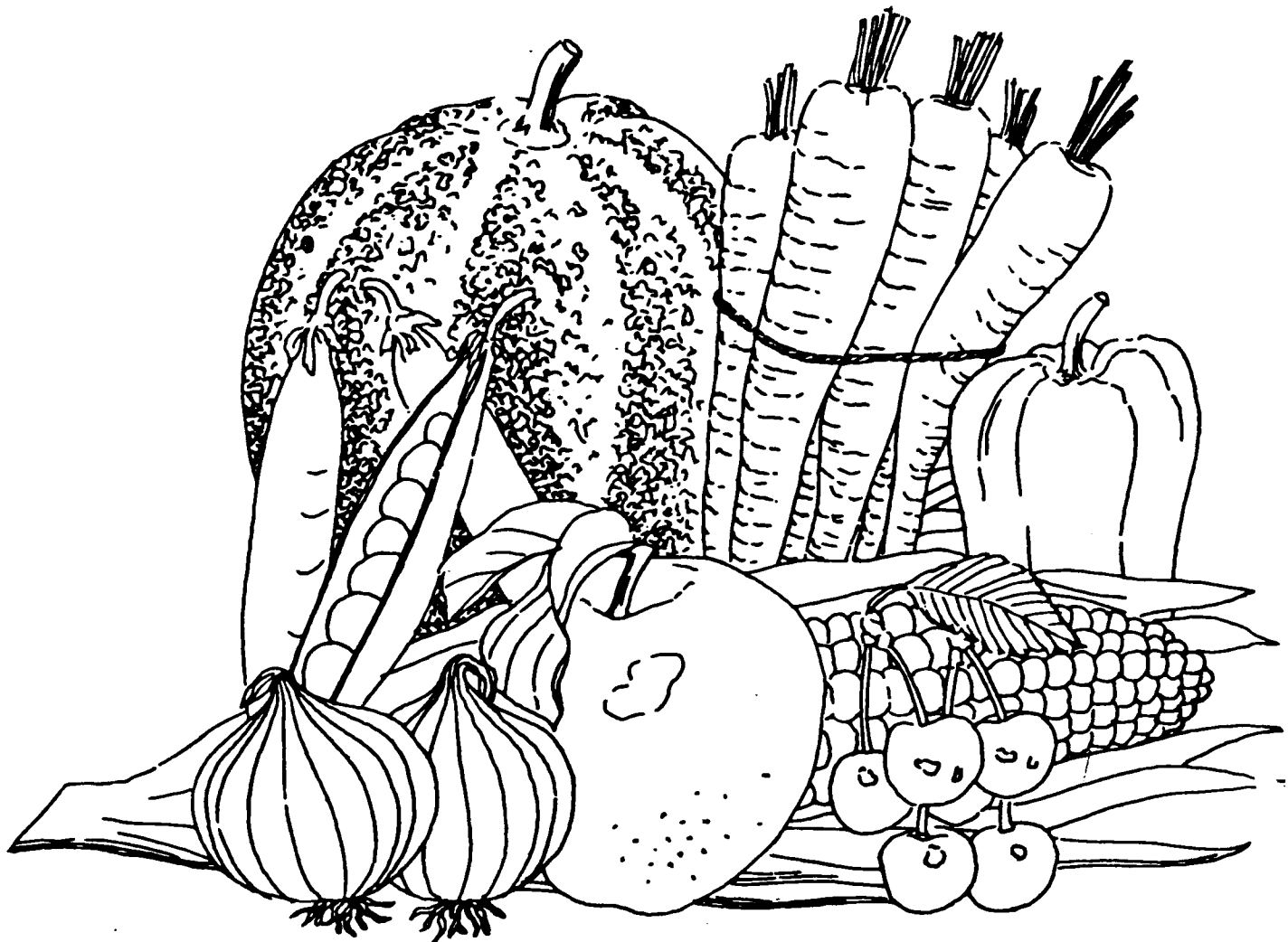


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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
FRUIT AND VEGETABLE DIVISION
FRESH PRODUCTS BRANCH

MARKET INSPECTION HANDBOOK
FOR
BUNCHED AND TOPPED CARROTS
AND
CARROTS WITH SHORT TRIMMED TOPS 1/

PRODUCTION AREAS

Carrots are important in terminal markets throughout the year. Most carrots are marketed with tops removed, either in consumer size film bags, in large film bags or in open mesh bags. Some of the carrot crop is marketed bunched with tops attached. A small part of the crop is marketed with short trimmed tops.

Many carrots are produced seasonally in areas near terminal markets, however, the heavy volume of shipments are from California, Arizona and Texas and occur mostly when local supplies near the cities are light or are out of season. A substantial volume of carrots is also produced in Michigan, New York, Colorado, New Mexico and a few other states.

NOTE SHEET AND CERTIFICATE

Score Sheet for Topped Carrots: The headings for size of sample, soft rot, grade defects, diameter, length, firmness, shape, cleanness, etc. should be used on the note sheet for topped carrots similar to those for other root crops.

Score Sheet for Bunched and Short Trimmed Carrots: A careful record should be kept on the score sheet under appropriate headings for each sample examined. The following example illustrates a complete note sheet for bunched carrots.

1/ Portions of these Inspection Instructions pertaining to topped carrots are superseded by Topped Carrots - Market Inspection Instructions... issued April 1966.

No. Root	Def. Roots	De-cay Root	Form	Poor Color	Range Color	Under Size	Over size Specified	Size Range	Bch Size	No. Bch	Tops		Pck		
											Cond.	Lgth		Dam.	Dk
100	3 ms	0	W	2	MW SFW	2	0	3/4- 1-3/4 m. 1 to 1 1/2	FU	20	F&G	12-18	5	0	WF
100	2	0	FW	3	"	4	0	"		20	"	"	6	0	FWF
100	4	0	W	2	"	3	0	"		20	"	"	4	0	"
100	5	0	W	3	"	2	0	"		20	"	"	4	0	WF

(7) Samples should be selected so that they will be representative of the different lots and portions of the car. In scoring defects of the roots the individual carrot is the unit for all Standards, including Consumer Standards. In scoring defects of the tops the bunch is the unit for the Bunched Standards and Consumer Standards for bunched style. In the Short Trimmed Tops Standards the individual carrot is the unit, even though they are bunched. Bunches should be examined in multiples of 10 since a tolerance of 10% may have tops which are damaged.

(8) APPLICATION OF TOLERANCES

(9) U. S. Standards for Carrots with Short Trimmed Tops,
and
U. S. Standards for Topped Carrots

Limits Permitted in Individual Packages Which Contain More Than 5 lbs.		Limits Permitted in Individual Packages Which Contain 5 lbs. or Less.
For tolerance of 10% or More.	For tolerance of less than 10%.	Individual packages not restricted, except that not more than 1 carrot may be frozen or affected by soft rot in any package.
1-1/2 times the tolerance.	Double the tolerance except that at least 1 defective carrot permitted in any package.	

U. S. Standards For Bunched Carrots

(10)

Limits Permitted in Individual Packages for Tolerance of 10% or more	Limits Permitted in Individual Packages for Tolerance of less than 10%
1-1/2 times the tolerance, except that at least 1 defective and 1 off-size carrot permitted in any package.	Double the tolerance, except that at least 1 defective and 1 off-size carrot permitted in any package.

U. S. Consumer Standards for Carrots: Individual packages under these standards are not restricted for any tolerance; Provided, that the average is within the tolerance specified. (11)

CAR INITIALS AND NUMBER, KIND OF CAR, WHERE INSPECTED, CONDITION OF CAR. (12)

Refer to Destination Market Handbook. (13)

PRODUCTS INSPECTED AND DISTINGUISHING MARKS. (14)

Refer to Destination Market Handbook. (15)

The following factors should be reported under this heading: (16)

1. Product.
2. Type of Container.
3. Brand or marks.
4. State of origin.
5. Quantity inspected.

(1) Product. The product will practically always be designated on the certificate without any attempt to determine the type or variety. Bunched Carrots, Topped Carrots or Carrots with Short Trimmed Tops will suffice. Inspectors should not attempt to certify variety. It is permissible to report the shape of the roots as being of a certain type provided the inspector is quite certain that such a statement is true. For example: "Long type Bunched CARROTS in.....". If the variety is manifested, it may be so reported if requested by the applicant, unless it is obviously in error in which case the request should be declined. (17)

Long Type. In determining type, when the applicant requests it to be reported, the principal difficulty is in distinguishing between the long type represented by the Emperor variety and the half long type, such as Chantenay and Danvers Half Long. Whenever the lot as a whole is found to be distinctly long or distinctly half long, it will be satisfactory to report: "Long type Bunched CARROTS..." or "Half long type Bunched CARROTS....." in accordance with the facts. In many lots the (18)

roots may not be distinctly of one type or the other but range from long to half long with all intermediate degrees. Such variation is not unusual, and no attempt should be made to describe type in such a situation though the variation in shape may be described if specifically requested by the applicant.

- (19) Short Type carrots such as the Oxheart variety, are seldom encountered in commercial shipments of bunched carrots but are commonly shipped as topped carrots in some areas. They can usually be readily distinguished as they are distinctly shorter and broader than the long or half long types.
- (20) For a complete description of the various varieties of carrots refer to Miscellaneous Publication No. 361, Description of Types of Principal American Varieties of Orange Flashed Carrots.
- (21) (2) Type of Container.
- (a) Topped Carrots from the leading production areas are shipped mostly in one pound size film bags, usually packed 48 to a wirebound crate or 24 to a carton. Master containers of other types for the film bags are also used to a limited extent such as open mesh bags and dozen bag size cartons. A small volume of carrots is packed in 20 and 32 ounce consumer bags. These are used mostly for shipments to Canada.
- (22) Topped Carrots are also shipped in volume in the standard 50-pound open mesh bag. A small volume is shipped in larger film bags of various sizes ranging from 5 to 50 pounds capacities and a few are shipped loose in boxes, cartons and lined crates. In some areas it is a common practice to ship carrots in used open mesh or burlap sacks for prepackaging in the markets. Also in some sections near the markets, carrots are shipped in bushel baskets, hampers, lugs, etc.
- (23) (b) Bunched Carrots are most commonly packed in the standard lettuce crate although in some cases a half size crate is used. When the lettuce crate is used, it may be referred to merely as a "crate" without any description as to size. If the half-size crate is used, this should be reported under the Products heading. Furthermore, since it is customary for the crates to be paper lined and lidded, this need not be mentioned. However, if the crates are not lined and lidded in the usual manner, this fact should be mentioned.
- (24) (c) Carrots with short trimmed tops are usually shipped in sacks, cartons or crates of various sizes. The carrots may be bunched but most often they are jumble packed in the container.
- (25) (3) Brands or Marks. The containers are often stenciled, labeled or printed to show the brand, shipper's name and address, net weight of the contents and point of origin. Such brands or labels, including

the shipper or packer's address, if it appears on the label, should be quoted on the certificate. Shipments may contain several brands or labels covering different growers' lots. If the carrots in the various lots are fairly uniform in size and quality, it is not necessary to quote the various brands or marks if there are 3 or more, but the fact should be mentioned that there are various lots or brands. When there is a material difference between the different lots, so that it is necessary to report them separately under some of the other headings on the certificate, it is best to enumerate them under the Products heading.

(4) State of Origin. If the containers are not marked to indicate the State of origin, or it is not clearly shown by the shipper's address, inquiries should be made of the applicant or carrier as to its origin, and a statement made to the effect that it was invoiced or manifested as being from a certain State. Under all conditions, such statements should be based on some authority other than that of the inspector. (26)

(5) Quantity Inspected. Follow the usual practice of securing from the applicant or transportation agent a statement as to the number of packages in the shipment, which should then be reported as "Applicant's count," "Manifested as," etc. Do not make an unqualified statement as to the number of packages unless you personally have been able to make an accurate count. (27)

Examples of Products Inspected and Distinguishing Marks: (28)

1. Topped CARROTS in cottonnet sacks brand "Texas Wrangler Brand, 50 lbs. net." Manifested as 500 sacks shipped from Texas.

2. Topped CARROTS in round bottom bushel baskets labeled "Star Brand, Louisiana Carrots, 50 lbs. net." Lids stamped "U. S. No. 1, 1-1/2 inches minimum." Manifested as 620 baskets.

3. Bunched CARROTS in crates labeled "Top Sale Brand; Phoenix, Ariz." and stamped "6 Doz. Bunches, Medium-Large." Manifested as (or applicant states) 346 crates.

4. Topped CARROTS in film bags printed "Golden Girl Brand, 1 lb. net." packed 48 to a wire bound crate. Applicant's count 510 crates.

CONDITION OF LOAD AND CONTAINERS (29)

For general information described under this heading, refer to the Destination Market Handbook. (30)

A. Types of Loads for Topped Carrots. Standard loading arrangement for containers used. See D. M. Handbook. (31)

- (32) B. Types of Loads for Bunched Carrots. There are various types of loads used for bunched carrots, the method generally depending upon the number of crates to the car. The common load of full size crates is from 346 to 352 crates, and in a few cases up to 360 crates. When there is crushed or chunk ice over and/or through the load, it should be reported and described as to amount and location.
- (33) During the summer months, cars of bunched carrots which are loaded with the bottom of the lower layer sidewall rows crates tight against the sidewalls, frequently show yellowing and discoloration of the tops extending a few inches into the crates to the entire contents. This is apparently due to the partial blocking of refrigeration at this point. It has been noted that cars loaded with the bulge next to the sidewalls do not show this condition. Therefore, it is important, when sidewall crates show yellowing, to show position of sidewall crates, i.e., lids next walls or bottoms tight against the sidewalls.
- (34) Example: Through lengthwise load, 2 lower layers on sides 6 rows with lids next sidewalls, 3rd layer on sides 5 rows and top layer on bottom 5 rows. Approximately 1 foot of crushed ice over load.
- (35) CONDITION OF PACK
- Refer to the Destination Market Handbook, same heading.
- (36) A. Topped Carrots (also carrots with short trimmed tops.)
- (37) When the product is in sacks or film bags (including consumer size film bags) the Pack heading should be followed by x x xs.
- (38) Carrots in open mesh sacks and in large film bags may be jumble filled or may be placed in the containers in an orderly crosswise arrangement. Consumer size bags are filled by hand with an effort usually being made to obtain a fairly uniform fill and an even weight.
- (39) The pack of topped carrots, and carrots with short-trimmed tops, in cartons, boxes, baskets, etc. may be described by the use of the terms well filled, fairly well filled and slack. If these packs are faced this fact should be mentioned. For definitions of these terms refer to the general D. M. Handbook.
- (40) B. Bunched Carrots.
- (41) Bunched carrots in full size crates are usually packed with 3 layers of bunches, containing 2 dozen bunches to the layer. Crushed ice is placed over each layer.
- (42) Under this heading the lid bulge in connection with tightness is not so important, as the lids are slightly longer than the crate and there would be a bulge regardless of the contents. The tightness of the pack

should always be considered when the container is resting on its bottom. When the container is resting on its side, the side slackness or tightness should not be reported. The terms "tight," "fairly tight," etc., as used in describing pack of commodities packed in ice, are not satisfactory because these terms do not in all cases represent the tightness of the product. The tightness of the package in most cases is determined by the amount of ice in the pack.

In describing tightness the following terms should be used: (43)

"Well filled" means that the bunches are packed tight in layers.

"Fairly well filled" means that the bunches are packed fairly tight in layers.

The relative amount of ice in the crate should be reported by the following terms: (44)

"No ice in crates" when there is no ice.

"Practically no ice in crates" when there is only a small scattering of crushed ice or a few small pieces remaining.

"Small amount of crushed ice in crates" when there is a small amount over one or more layers.

"Good amount of crushed ice in crates" when there is about the normal amount of ice.

"Large amount of crushed ice in crates" when there is considerably more than the normal amount.

Reporting Gross or Net Weight of Containers: An inspection should not be made only for net or gross weight. If requested, in connection with a condition or grade inspection, the weight may be reported under the "Pack" heading. Report the range in weights, the average, and the percentage of containers which are under the weight specified or under the weight marked on the containers. (Refer to Destination Market Handbook for detailed instructions.) (45)

Examples of Pack: (46)

1. Mostly well filled, many fairly well filled, few 1/2 inch slack (Topped).
2. Well filled with good amount of crushed ice over layers (Bunched).
3. From 46 to 53, average 49 pounds net per sack with 15% of sacks under 50 pounds net weight.
4. From 14-1/2 to 18, average 15-1/2 ounces net per bag with 20% of bags under 16 ounces net weight.

(47) TEMPERATURE OF PRODUCT

Refer to the Destination Market Handbook.

(48) SIZE

Refer to Destination Market Handbook, same heading.

(49) A. Topped Carrots

(50) Minimum and Maximum Size. Unless other sizes are specified, the U. S. Extra No. 1 grade for Topped carrots requires that the diameter of each carrot shall not be less than 3/4 inch, not more than 1-1/2 inches and that the length shall be not less than 5 inches. Unless otherwise specified, U. S. No. 1 and U. S. No. 2 Topped Carrots shall be not less than 1 inch, nor more than 3 inches in diameter, nor less than 3 inches in length. Each grade of Topped Carrots contains a 5% tolerance for carrots which are less than the specified minimum diameter, a 10% tolerance for carrots which are greater than the specified maximum diameter and 5% tolerance for carrots which are shorter than the specified minimum length.

(51) While there is no maximum root length specified in the grades the root length is generally important to the buyer and should be reported under the Size heading on the certificate.

(52) Certifying Size Only. Since size is a factor of quality in the Topped Carrot Grade, it will be permissible to certify "Size Only" on the certificate, if it is so requested by the applicant.

(53) Standard Sizing on Topped and Short Trimmed Carrots. Standard sizing may be certified in connection with the grades for topped carrots and carrots with short trimmed tops when the product is in packages weighing approximately 2 pounds or less. This classification requires that the carrots in not less than 80% of the individual packages in a lot shall not vary more than 3/8 inch in diameter or 2-1/2 inches in length. If requested by the applicant, the count per package may be reported on small packages.

(54) Examples of Topped Carrots Size Statements:

1. Generally 1 to 3, mostly 2 to 2-3/4 inches in diameter, and 4 to 9, mostly 5 to 7 inches in length. 2% undersize and 5% oversize noted.

2. Generally 3/4 to 1-1/2 inches in diameter and 5 to 10, mostly 6 to 8 inches in length. Undersize within tolerance.

3. Generally 3/4 to 1-1/2 inches in diameter and 5 to 8 inches in length; 3 to 10% average 8% under 3/4 inch in diameter; 2 to 8% average 6% under 5 inches in length including 3% also reported as under 3/4 inch in diameter. 2% over 1-1/2 inches in diameter.

B. Bunched Carrots (55)

1. Size of Roots. The U. S. No. 1 grade provides that unless "otherwise specified" the diameter of each carrot shall not be less than 3/4 inch. The tolerances specify that not more than 5% by count may be below the specified minimum diameter and not more than 10%, by count, may not meet any maximum diameter which may be specified in connection with the grade. In case a minimum size other than that provided in the grade is specified, the same tolerance will apply. (56)

In reporting size, ordinarily state the range in diameter; and, if the range is over 3/4 of an inch, a "mostly" may be shown, provided that definitely more than 55% is covered in the "mostly" range. Extreme care should be exercised to see that the "mostly" range represents conspicuously the greater portion of the lot. When reporting size, the occasional specimen that is outside the general range should be ignored in showing the range. These outside specimens can be covered by the use of the term "generally" preceding the range. Thus: "Generally 3/4 to 2-1/4, mostly 1 to 2 inches in diameter;" or, if the actual size is desired, as follows: "Average 10% under 1 inch including 2% under 3/4 inch, 70% 1 to 1-1/2 inches, 20% from 1-1/2 to 2-1/4 inches in diameter." The diameter of carrots may be reported to eighths of an inch, if necessary, to accurately describe their size. (57)

Length of Roots. If a specific request is made, the range of length of roots may be reported, however, this is not a factor in the grade. If the range is over 2 inches, a "mostly" may be reported to indicate over 55% of the lot. (58)

Size Classification of Roots. There is no size classification of roots in any of the U. S. Standards for carrots. Inspectors should report size of roots only in diameters and length. Requests for inspections on the basis of small, medium and large should be declined. (59)

2. Length of Tops. (60)

The U. S. No. 1 grade specifies ".....the length of tops shall be not more than 20 inches, unless otherwise specified" and that ".....unless otherwise specified, the bunches shall have full tops." Not more than an average of 25% of the bunches may have tops longer than the specified length; however, individual packages may contain as high as 37.5% of tops over the specified length. (61)

The length of tops may be designated as "short," "medium," "long" or "extra long" or a combination of these length designations may be used. If these length of top terms are to be used, the inspector should refer to the definitions of these terms in the grade. (62)

Most bunched carrots have full tops so this fact need not be stated. If the tops have been clipped or are not full, this fact should be stated thus: "Tops clipped to 16 inches." (63)

(64) 3. Uniformity in Sizing When Standard Bunches Certified.

(65) Inspectors should not certify Standard Bunches unless specifically requested to do so by the applicant. In that event, the facts pertaining to Standard Bunches should be reported under the "Size" heading on the certificate, but the actual certification should be made under the "Grade" heading. The portion of bunches complying or failing to comply with the requirements of Standard Bunches may be reported under the "Size" heading.

(66) Requirements for Standard Bunches. Refer to the standards for bunched carrots.

(67) If bunches do not meet the weight requirement, or are not within tolerance for ranges specified in the Standards, they must be reported as small or irregular as the case may be, followed by the usual size description.

(68) Most shippers want to put up bunches weighing not less than 1 to 1-1/4 pounds per bunch, also each bunch to have carrots of approximately the same length. Bunches should be tied tightly so they will not appear to be straggly or loose.

(69) 4. Count Per Bunch Upon Request.

The number of carrots per bunch may be certified, along with other information of size, when specifically requested by the applicant. In reporting the count per bunch, the range in the number of carrots per bunch along with a "mostly" should be shown. Example: "Range from 4 to 9, mostly 5 to 7 carrots per bunch."

(70) 5. Number of Bunches Per Crate Upon Request.

It is permissible to certify the number of bunches or the "dozen bunches count per crate" upon request of the applicant along with the other information of size, quality, condition and grade. If the applicant is interested only in the number of bunches per crate, it will be necessary to certify "Condition" also. The entire contents of several crates should be examined to determine the accuracy of the statement: "Conforms to dozen count" or other statement in reference to count of bunches.

(71) Examples of Bunched Carrots Size Statements:

1. (U. S. No. 1, Standard Bunches.) Generally 3/4 to 2, mostly 1 to 1-7/8 inches in diameter. Off-size within tolerance. From 4 to 8, mostly 5 to 7 carrots per bunch. Roots fairly uniform in bunches. Bunches generally weigh from 1 to 2 pounds. Tops 16 to 20 inches in length.

2. (U. S. No. 1) Generally 3/4 to 1-7/8, mostly 1 to 1-1/2 inches in diameter. Undersize within tolerance. Tops 14 to 18 inches in length.

3. (Not U. S. No. 1 Account Undersize but makes U. S. No. 1, 1/2 inch minimum.) From 1/2 to 1-1/2, mostly 3/4 to 1-1/4 inches in diameter. From 5 to 20%, average approximately 12% under 3/4 inches in diameter, including 3% under 1/2 inch. Tops 14 to 22, mostly 15 to 18 inches in length with less than 25% over 20 inches in length.

4. Generally 3/4 to 1-3/4 inches, mostly 1 to 1-1/2 inches in diameter. 2% undersize. Tops medium length. 4 to 10, mostly 5 to 8 carrots per bunch. Range from 62 to 78, averages 70 bunches per crate.

(Note: Under Remarks state "Inspection for bunch count made at applicant's request.")

C. Carrots with Short-Trimmed Tops. (72)

The same size specifications and tolerances apply to carrots with short-trimmed tops as to bunched carrots, except that the specifications for length of tops have been replaced by a provision that the leafstems "shall be cut back to not more than 4 inches in length." A tolerance of 10% by count is provided for leafstems over 4 inches long. There is no requirement as to the minimum length of leafstems. Any carrot showing one or more leafstems identifiable as such meets grade requirements. Carrots with no leafstems should be scored against the 10% tolerance for defects of leafstems.

Standard Sizing may be reported on carrots with short-trimmed tops when it is requested by the applicant. Refer to the standards for requirements. (74)

Example of Short-Trimmed Tops Size Statement: (75)

Generally 3/4 to 1-1/2 inches in diameter. Undersize within tolerance. Tops generally 4 inches or less in length.


When Undersize and Oversize Specimens Also Show Grade Defects: (76)

Refer to the Destination Market Handbook.

QUALITY (77)

The following factors should be reported under this heading: (78)

1. Form (Shape).
2. Smoothness.
3. Cleanness.
4. Color of Roots.
5. Trimming.
6. Defects.

- (79) (1) Form (Shape): The shape of carrots is to be described by the use of the terms well formed, slightly misshapen, badly misshapen and seriously misshapen. They are defined as follows:
- (80) Well formed means that the carrot is not forked or misshapen to the extent that its appearance is more than slightly affected. Well formed is the minimum shape requirement of U. S. Extra No. 1 Topped Carrots and of all of the Bunched Carrots, Short Trimmed Top Carrots and Consumer Standard Grades.
- (81) Slightly misshapen describes carrots that cannot be considered "well formed" but are not sufficiently misshapen to be classed as "badly misshapen." This term can be used to describe carrots that are passable for shape as U. S. No. 1, Topped Carrots but will not meet the requirements of U. S. Extra No. 1, Topped Carrots, or the Bunched Carrots, Carrots with Short Trimmed Tops and Consumer Standard Grades.
- (82) Badly misshapen means that the carrots are forked or misshapen (by being twisted, crooked or badly curved) to the extent that their appearance is materially affected. "Not badly misshapen" is the minimum shape requirement of the U. S. No. 1 Topped Carrot grade. Badly misshapen carrots should be scored as defects in all grades except U. S. No. 2 Topped Carrots.
- (83) Seriously misshapen means that the carrot is forked or misshapen to the extent that the appearance is seriously affected. The minimum shape requirement of the U. S. No. 2 Topped Carrot grade is "not seriously" misshapen. Seriously misshapen carrots are defects of all grades.
- (84) The official photographs should be referred to for guidance in the interpretation of the above terms describing shape. Shape is scored on the basis of appearance only as illustrated by the official photographs. Waste is not a factor in scoring shape. Carrots that are not sufficiently off-shape to be scored as grade defects should be described by the above terms, usually in connection with the general quantity terms, thus: "Generally well formed" or "Mostly well formed, many slightly misshapen".
- (85) (2) Smoothness. The U. S. Extra No. 1 grade for Topped Carrots and all of the U. S. No. 1 grades specify that the carrots must be fairly smooth, also Grade A and B of the Consumer Standards require the carrots to be fairly smooth. This is defined as meaning that the carrots are not rough, ridged or covered with secondary rootlets to the extent that the appearance is materially affected. However, since shape and smoothness are more or less related, inspectors should consider the two factors together when scoring carrots. Therefore a stricter interpretation should be given the term "fairly smooth" when scoring under grades which require the carrots to be well formed than when scoring under grades which only require the carrots to be "fairly smooth and not badly misshapen."
- 

In determining smoothness under the term fairly smooth, the roughness of the surface as well as the effect that secondary rootlets may have upon the general appearance should be considered. Secondary rootlets, when in sufficient number, should be considered as affecting smoothness and, therefore, scored against grade on smoothness. Even though the grades specify fairly smooth, if they are smooth they should be so described. Either misshapen or rough stock may be the result of various causes, such as having been produced in hard, rocky ground, crowding in the rows, freezing damage at an early stage of growth, irrigation or water cut off - no growth for a period and then irrigated again, or other causes.

(86)

The following terms should be used in describing smoothness:

(87)

1. "Smooth" means that the carrot has a fairly even surface, not ridged, grooved, lumpy, and is practically free from secondary rootlets.

2. "Fairly Smooth" means that the carrot is not rough, ridged, or covered with secondary rootlets to the extent that the appearance is materially affected.

3. "Rough" means that the carrot is ridged, grooved, lumpy or covered with secondary rootlets to an extent that the appearance is materially affected.

4. "Excessively rough" means that the carrot is rough or ridged to the extent that the appearance is seriously affected.

(3) Cleanness. The requirements as to cleanness are different in the various carrot grades. The definitions of the terms to be used to describe degrees of cleanness and the requirements of each grade as to cleanness are listed below:

(88)

Clean means that the individual carrot is practically free from dirt or foreign matter. Carrots that can be classed as clean practically always have been washed, however, the fact that a carrot has been washed does not necessarily mean that it is clean. Only the U. S. Extra No. 1 Topped Carrot Grade and Grades A and B in the Consumer Standards requires that carrots be clean.

(89)

Fairly clean means that the individual carrot is reasonably free from dirt, stain or other foreign matter and that the general appearance of the carrots in the lot is not more than slightly affected. Any appreciable amount of caked dirt on a carrot would affect its appearance. This applies to the individual carrot when the root is dirty or to the bunch when the tops are damaged by dirt. Carrots must be fairly clean or better to meet the requirements of the U. S. No. 1 and U. S. Commercial grades in the standards for Bunched Carrots and Carrots with Short Trimmed Tops.

(90)

- (91) Slightly Dirty is not defined in the carrot standards but may be used to describe carrots that are not "fairly clean" but are not so dirty that they are "damaged by dirt." Slightly dirty carrots meet the requirements of the U. S. No. 1 and U. S. No. 2 grades for Topped Carrots only.
- (92) Dirty may be used to describe carrots that are "damaged by dirt." Either of these terms describes carrots affected by dirt or other foreign matter that materially affects the general appearance of a lot or affects individual carrots so that they are badly caked with dirt or are badly stained. In determining whether a lot is dirty or stained enough to be damaged by dirt, the general appearance of the lot should be taken into consideration as well as the appearance of the individual specimens. Individually badly caked roots (that is, those which have over 1/2 of their surface caked with dirt or badly stained stock) should be scored with other defects as damage. There may be lots which will not have any badly caked or badly stained stock but still there may be adhering soil or staining on enough roots to materially affect the appearance of the lot. The appearance of such a lot is damaged and fails to meet grade. As a guide, inspectors should put lots out of U. S. No. 1 Topped Carrot grade when the quantity term "generally" will not include all stages of cleanness other than "dirty," thus: "Carrots are mostly slightly dirty, some dirty," or "In most sacks fairly clean, some dirty."
- (93) Serious damage by dirt applies to carrots whose appearance is seriously affected by dirt or staining. Individual carrots with more than 1/2 of their surface caked with mud or dirt (lesser amounts when the dirt is thick or dark) should be scored against the U. S. No. 2 grade for Topped Carrots and against the restricted tolerance for serious damage in all other grades.
- (94) When a lot of carrots meets the requirements of a higher cleanness classification than the minimum of the grade on which they are being inspected, this fact should be reported, for example: On a lot of U. S. No. 1 Topped carrots:- "Carrots are clean" or "Carrots are mostly fairly clean, many clean," etc.
- (95) (4) Color of Roots: The terms well colored, fairly well colored and poorly colored should be used to describe the color of roots. The inspectors should refer to the colored photographs in their offices to form a mental picture of the shades of color represented by these terms.
- (96) The U. S. Extra No. 1 grade for Topped Carrots and the U. S. No. 1 and U. S. Commercial grades for Bunched Carrots and Carrots with Short Trimmed Tops and Grade A and B Grade in the Consumer Standards specify that the roots shall be fairly well colored. This is defined as meaning that the carrot has an orange, orange red or orange scarlet color but not a pale orange or a distinct yellow color. There is no color requirement in the U. S. No. 1 and U. S. No. 2 grades for Topped Carrots but their color may be reported if requested by the applicant.

In case carrots show a mottled color, as they sometimes do following heavy rains, the average color should be considered. Frequently the lower part of the root will be poorly colored while the upper part will be fairly well colored. In cases of this nature, if the lower portion is decidedly light in color, the carrot must be considered poorly colored. (97)

(5) Trimming. Topped Carrots are required to be "well trimmed" in all grades. "Well trimmed" means that the tops are cut back to not more than 1 inch in length, except that new leaves developing within the original central cluster of leafstems, or occasional uncut leaves or leafstems, exceeding this length which do not materially affect the appearance of the carrots in the container shall be permitted. Carrots may have tips of roots cut or broken off; Provided, That these cuts or breaks are small and fairly smooth and do not materially affect the appearance of carrots in the container. (98)

Carrots with Short Trimmed Tops have a separate 10% tolerance for leafstems over the maximum 4 inch length permitted. They also have a 10% tolerance for defects of leafstems, including 5% for leafstems affected by decay. Individual carrots with discolored, or otherwise damaged leafstems should be scored individually (even though they are tied in bunches) against the tolerance for damaged leafstems. (99)

In determining the length of leafstems and cut back tops, measurements should be made from the point of attachment of the stems to the roots. (100)

(6) Defects: In scoring defects of the roots the individual carrot is the unit. In scoring defects of the tops, the bunch is the unit in the Bunched Carrot Standards and in the Consumer Standards for Bunched Style. Therefore it is necessary to keep separate scoring for defects of the roots and defects of the tops. There are separate tolerances in the grades for both tops and roots. Remember Bunched Carrots, Carrots with Short-Trimmed Tops and Consumer Standards Carrots are scored by count but Topped Carrots in the Topped Carrot Standards are scored on a weight basis, except those in packages of approximately 2 pounds or less, which must be scored on a count basis. (101)

Insect Injury: Wireworm and nematode are the most common insects affecting carrots. Nematodes may cause the root to be rough, or cause enlarged tips of carrots or the secondary rootlets to have enlarged nodules resulting in a rough appearance sufficient to score against grade. Since such roughness may be due to other causes, such carrots should be scored as rough. See paragraph on smoothness. (102)

The extent of the injury caused by wireworm is difficult to determine. Unless the injury is only very slight and distinctly superficial it must be scored as damaged in Bunched, and Short Trimmed tops and Consumer Standards grades. In Topped Carrots Standards damage permits 5% waste, but ordinarily the appearance will be materially damaged without causing 5% waste in which case it should be scored as damage. (103)

- (104) Growth Cracks: Deep or rough growth cracks are considered as damaged but growth cracks which are smooth and shallow shall not be considered as damage if they do not materially affect the appearance of the carrot. Specimens that have several growth cracks or very deep and long cracks sufficient to seriously affect the appearance would be scored against the U. S. No. 2 for Topped Carrots and against the restricted tolerance for serious damage in the other carrot grades.
- (105) Mechanical Damage: Mechanical damage includes stock which is bruised, cut or broken. If only a small portion of the tip is cut off, broken off or bruised or a small portion of the crown cut off on topped carrots and not sufficient to materially affect the appearance of the carrot, it should not be scored as damaged. However, if any material portion is bruised, broken or cut off sufficiently to damage the appearance, it must be scored. While the term "mechanical damage" is not fully descriptive, it can be used in cases where there are small percentages of cuts, bruises and broken carrots which can be grouped under this term without giving the longer description that would be necessary if each type of defect were enumerated.
- (106) Seedstems: Seedstems in carrots may be the result of volunteer growth from the previous crop or develop late in the season when tops are inclined to make rank growth. Seedstem growth materially affects the flavor and eating quality of the carrots and when readily noticeable, the root should be scored against the U. S. No. 1 grades. Any carrot showing that the seedstem has been removed should be scored, for the seedstem has affected its "edible quality." Seedstems may also cause serious damage to the carrots.
- (107) Sunburn: Sunburn which causes a loss of more than 3%, by weight, in the Bunched, Short-Trimmed Tops and Consumer Carrot Standards or 5% in Topped Carrots Standards, shall be considered as damaged, except that superficial light green color at the stem end which does not materially affect the appearance of the root shall be permitted. The superficial green or purple color at the crown, which does not penetrate into the carrot sufficiently to cause internal greening, should not be counted in determining waste or damage. In determining waste, the top of the carrot should be cut off as in the ordinary preparation for use, after which any additional cutting necessary to remove the green discolored area should be considered in determining the percentage of waste. Only that portion of the carrot in which the green predominates over the orange or yellow color should be considered as discoloration in determining waste. Inspectors should cut suspicious appearing carrots to determine if greening extending into the core causes more waste than permitted by the grade.
- (108) Ordinarily a cut a half inch below the top of the crown will constitute from 3 to 5% waste, depending on the length and diameter of the carrot. On a long type carrot the 1/2 inch will be about 3%, and on the shorter type, the 1/2 inch will be about 5%. If the discoloration is confined to one side, the equivalent of 1/2 inch on both sides should be permitted.

-17-

Pithiness: Pithiness is probably the result of unfavorable growing conditions or frost injury resulting in the texture of the roots being fibrous and spongy. In order to determine pithiness the roots that show indication of sponginess should be cut or broken so a cross section may be viewed, as well as observing the crispness of the carrot while cutting or breaking. Roots that are definitely spongy and porous should be scored as damage. (109)

Woodiness: Carrots which have been growing for a long time often develop woody cores. Carrots that are planted in the Fall and harvested in the Spring are more apt to show this condition. Woody cores are very tough and fibrous. A test for determining woody cores is to cut the carrot at right angles to its longitudinal axis with a sharp knife. If the core is woody to the extent that the knife will require appreciably more force to cut it than is required to cut the surrounding layer of flesh it is usually woody enough to score. If any tissues are woody enough to score as damage they usually will be sufficiently woody to score as serious damage. (110)

Bacterial Blight: Bacterial Blight affects roots, leaves, flower stalks and flower heads of carrots in the field. On the leaves, it will appear as irregular necrotic spots and on the stems and petioles as brownish streaks. These types of injury are scored on the basis of tops "free from damage." On the roots it appears as constrictions where the infection has been earlier. Again, it may appear as narrow bands of brown or black, later to become raised or scabby and then coalesce. These types are scored on the basis of appearance and waste, but chiefly on appearance, under the definition of damage. When scored as defects on the roots these injuries are called "blight scars." (111)

Oil Spray: Oil spray damage may occur when fields are sprayed with an oil spray for weed control. If the application of oil spray is made while the carrots are very young, no damage will result. To determine oil damage, observe the carrot(s) for signs of oil residue. If the oil residue is readily noticeable, the carrot(s) should be scored against all grades. Make no attempt to certify such a lot until advice has been received from your supervisor. (112)

Excessively Straggly or Ragged Tops: Occasionally, in the bunching process it is necessary to trim off so many brown, or otherwise discolored leaves and leafstems that it gives the bunch an excessively straggly or ragged appearance. On account of the wide variation in size, number of leaves, and length of tops, it is impossible to state a minimum number of leaves that each individual carrot must have to meet the minimum requirements of damage by any cause to the bunch. If the tops have been trimmed to the extent that there are a number of bare leaf stems with very few full leaves remaining, resulting in the bunch having (113)

an excessively straggly or ragged appearance, the bunch should be scored against the grade. Unless an excessive number of leaves have been removed on account of freezing injury, blight, or other causes, there generally will be a sufficient number of leaves to consider the tops as satisfactory for the bunch as a whole. However, if only a relatively few leaves remain, the bunch should be considered materially affected and scored as a defect against the 10% tolerance for defects of tops.

(114) "Bronze" or "Purple Colored Tops." Sometimes certain sections of carrot fields may have tops that are somewhat "bronze" or "purple" colored. These tops should not be considered damaged unless the general appearance of the bunch is materially affected. This color is a growing condition and is not considered so objectionable as brown discoloration, and inspectors should allow considerable of this type of discoloration before considering the appearance of the tops materially affected.

(115) CONDITION

Refer to the Destination Market Handbook.

(116) The following factors should be reported under this heading:

1. Firmness of roots.
2. Freshness of tops.
3. Color of tops.
4. Other condition defects.
5. Decay.

(117) (1) Firmness of Roots: The carrot grades all specify the roots shall be "firm" which is defined as meaning that the carrots are not soft, flabby or shriveled." Firmness should be described by the following terms:

1. "Firm" means that the carrots are not soft, flabby or shriveled.
2. "Fairly Firm" means that the carrots are slightly wilted, soft or flabby. (Fails to meet requirements of all grades).
3. "Flabby and Wilted" means that the carrots are badly wilted, flabby, soft, limp or rubbery.

(118) The range and average percentage of flabby and wilted roots and fairly firm roots should be reported. The location in the crate and in the car should be shown as this has an important bearing on indicating whether wilting occurred prior to packing or during the transit period due to lack of adequate refrigeration.

Examples:

(119)

1. From 5 to 40%, average approximately 20% roots, scattered through packs, are flabby and wilted.

2. In most samples none, in some crates adjacent sidewalls 3 to 15% roots next bottoms of crates are flabby and wilted.

(2) Freshness of Tops: "Fresh" means that the tops are not badly wilted. (120)
"Fairly fresh" means that the tops are not fresh, but have a fairly fresh appearance.

(3) Color of Tops: The color of tops refers to the color of the leaves and not the leaf stems. In describing the normal color of the tops, the following terms should be used: (121)

"Good green color" means that the leaves show a good bright shade of green color.

"Light green color" means that the leaves show a light shade of green color.

(4) Other Condition Defects: (122)

Discoloration of Tops of Bunched Carrots: Discoloration of tops (123)
includes dark discoloration, which may be caused by bruising, water-soaked condition, or freezing damage to the tops, as well as to brown or yellow discoloration. In scoring discoloration of the tops, the bunch is the unit. Individual carrots cannot be scored. If there is sufficient discoloration to materially affect the appearance of the bunch, the bunch should be scored as a unit under a separate heading on the back of the note sheet. Since there is a separate tolerance of 10% for damaged tops, the lot as a whole will not be considered as having damaged tops if not over 10% of the bunches are so damaged.

While the tops are not used for food, the market value, to a (124)
large extent, is based upon the general appearance of the tops. Inspectors, therefore, should not become technical; on the other hand, bunches that show decidedly brown, black or yellow leaves in sufficient quantity to materially affect the appearance of the bunch, or bunches which have an excessively straggly or ragged appearance, should be scored as damaged tops.

Inspectors should check sidewall row crates loaded with bottoms (125)
tight against sidewalls, particularly during the summer months. If yellowing or discoloration is found, it should be described as accurately as possible, indicating the number of inches this condition extends into the crates.

- (126) Fresh Cracks: "Fresh cracks" are unhealed, narrow, and usually deep; they may occur or progress in transit as the result of jarring while the root is cold and brittle. Score as damage when the air crack is more than: 1/5 (20%) the length of the carrot; 1/8 inch wide; or 1/4 inch deep. Score as serious damage when more than: 1/2 (50%) the length of the carrot; 1/4 inch wide; or 3/8 inch deep.
- (126a) Carrots that show a combination of fresh cracks and other defects, neither of which is sufficiently severe to score without the combination, should be scored against the condition and reported under the "Condition" heading as fresh cracks.
- (127) Freezing Injury and Frozen Stock: All freezing injury or frozen stock should be treated as a condition factor in the markets and reported under this heading in the certificate. For a complete description of the various methods of reporting transit freezing, refer to the Destination Market Handbook.
- (128) New Top Growth: Near the end of the storage season stock may be encountered showing new top growth sufficient to cause damage even though the roots may be firm. An occasional specimen showing new top growth in excess of 1 inch in length would have very little effect upon the general appearance of the lot. On the other hand, an appreciable amount of the roots showing new top growth in excess of 1 inch in length would materially affect the appearance of the lot and should be scored and treated as a condition factor. Individual specimens that are materially affected should be scored as damage.
- (129) (5) Decay: For a complete description of the various decays of carrots, see Miscellaneous Publication No. 440, "Market Diseases of Fruits and Vegetables."
- (130) a. Dry rots such as Fusarium Rot or Black Rot should not be reported with soft rot. They should be scored on the damage of appearance and waste under the general definition of damage or serious damage as the case may be and scored against the tolerances for general defects.
- (131) b. Soft rot must be reported separately from other defects as the grades provide that carrots must be free from soft rot. If no soft rot is found, the certificate should state "no soft rot."
- (132) The Bunched Carrot, Carrots with Short Trimmed Tops and Consumer Standards grades provide a 1% tolerance for soft rot affecting the roots and a 5% tolerance for decay affecting the tops or leafstems.
- (133) The Topped Carrot Standards, U. S. Extra No. 1 grade provides a tolerance of 1% for soft rot, however, the U. S. No. 1 and U. S. No. 2 grades each provide a tolerance of 2% for soft rot.
- (134) In scoring and reporting decay of carrots, the inspector should report:
(A) Name, (B) Amount and (C) Degree of the decay. If the inspector cannot name the decay, it will be satisfactory to describe it. The most important

diseases of carrots are Watery Soft Rot, Bacterial Soft Rot and Black Rot. A clear description of the degree of soft rot found is important in order that interested parties may properly evaluate an affected lot. For example, at times considerable percentages of the roots will show decay just starting either in the tip end of the roots of bunched carrots or around the crowns of topped carrots, especially stock in which the tops may have been decayed. It is often possible to dispose of such stock to good advantage for immediate use.

Differentiate Between Decay and Dead, Watersoaked or Bruised Leaves. (135)
Attention is called to discolored, dead, bruised or watersoaked leaves which might be wrongly classed as decay. Careful examination of these leaves may show no mold and that the tissues do not disintegrate easily when rubbed, as is common in Bacterial Soft Rot. Such leaves are not decayed as this term is used in the Inspection Service. "Decay will be used in the sense of being a deterioration or decline involving decomposition, which is induced by fungi, bacteria and the like and which is of a complete and progressive nature; that is, in the sense of being a rot."

GRADE (136)

Refer to the Destination Market Handbook. (137)

Under this heading a statement should be made showing whether or not the lot inspected meets the requirements of the grade for which it was presumed to have been sold or of the grade, if any, marked on the container. When the grade is in question, and the lot is certified to be under the requirements of some certain grade, it should also be stated in just what respects the product fails to meet the requirements of the grade specified. (138)

Reporting Grade of Bunched Carrots When Tops are Damaged: In the Bunched Carrots Standards, when a lot of bunched carrots shows over 10% of the bunches with tops damaged by discoloration, or individual packages exceed one and one half times the tolerance (15%), the lot would fail to grade on account of damaged tops. As the 10% of the bunches permitted showing damaged tops is scored on the basis of the bunch, such percentages must not be added to the total defects, which are scored on the basis of the individual root, to arrive at a percentage of U. S. No. 1 quality. (139)

If the bunches with damaged tops are more than 1% but less than 10%, they should be reported by the use of the term "generally," either alone or in connection with a grade defects statement, thus: "Tops generally fresh and green" or "Tops generally fresh and green, damage by yellow leaves averages within tolerances." (140)

If the percentage of damaged tops exceeds the tolerances, the range and the average percentage of damaged bunches must be reported. If a lot is out of grade due to damage by tops, no percentage of U. S. No. 1 quality may be reported, however, a percentage of U. S. No. 1 quality or grade of the roots aside from the tops may be stated. (141)

(142) Examples:

"Lot now fails to grade U. S. No. 1 due to decay and discoloration of tops, but roots average 85% U. S. No. 1 quality."

"Carrots now fail to grade U. S. No. 1 due to damaged tops but roots are of U. S. No. 1 quality."

(143) More Complete Grade Statement of Percentage Cars: Frequently, when a shipment fails to grade U. S. No. 1, it is desired that the percentage of U. S. No. 1 quality now contained in the lot be shown. A certificate covering such a lot gives a detailed description of the lot under the "Quality and Condition" headings.

(144) The certificate should show as part of the grade statement not only the percent of U. S. No. 1 quality but also the percentage of decay or other serious defects of a progressive character which are restricted by the grade. However, decay and other serious defects of a progressive nature need not be mentioned under grade when they are within the grade tolerance.
Example: "Carrots now fail to grade U. S. No. 1 only account soft rot but now average 88% U. S. No. 1 quality, 5% soft rot affecting roots."

(145) Size in Connection with the Grade.

(146) When no minimum size is specified in connection with the grade, it is assumed that the minimum size is that stated in the grade. However, the applicant may specify a different minimum size. If undersize carrots exceed the tolerances either a lower minimum size may be specified in connection with the grade or the lot may be reported as failing to grade account the excessive undersize stated under the Size heading. Usually the applicant should be consulted on this as the size description used should be applicable to his contract to purchase. Remember, when sizes other than those specified in the grade are reported, they must be stated in connection with the grade statement, thus: "U.S. No. 1, 7/8 inch minimum." When requested, Standard Bunches and Standard Sizing may be reported in connection with the Grade statement, thus: U. S. No. 1, Standard Bunches.

REMARKS

(147) Refer to Destination Market Handbook.

(148) GENERAL EXAMPLES

(149) Topped Carrots

1. Size: Generally 1 to 2-1/2, mostly 1-1/4 to 2 inches in diameter and 3-1/2 to 7, mostly 4 to 6-1/2 inches in length. Average 3% under 1 inch in diameter.

Quality: Stock is fairly clean, smooth to fairly smooth, well trimmed and generally well to fairly well formed. From 7 to 20%, average approximately 12% grade defects consisting mostly of growth cracks and misshapen, some wire worm damage.

Condition: Roots are firm. Less than 1% decay, Watery Soft Rot mostly in early stages affecting tips of roots.

Grade: Fails to grade U. S. No. 1 on account of grade defects in excess of tolerance.

2. Products: Topped CARROTS in film bags branded "Queen Brand, Salinas, Calif., 16 ozs. net." Manifested as 500 cartons each containing 24 film bags.

Loading: x x x

Pack: x x x

Size: Diameter generally 1 to 1-1/2 inches; length 6 to 10, mostly 7 to 9 inches. Undersize within tolerance. Carrots meet requirements of Standard Sizing.

Quality: Clean, well formed, smooth. Grade defects well within tolerance.

Condition: Firm. No decay.

Grade: U. S. No. 1, Standard Sizing.

BUNCHED CARROTS

(150)

3. Size: Roots from 3/4 to 2, mostly 1 to 1-1/2 inches in diameter. Average 5% under 1 inch. Full tops 16 to 24 inches in length with less than 25% over 20 inches.

Quality: Roots are clean, generally fairly well colored, smooth to fairly smooth, and generally well formed. Grade defects from 2 to 12%, average 8% consisting of misshapen, poorly colored and rodent damage.

Condition: In all crates next each sidewall and bunker wall and in all floor layer crates stock next exposed portions of crates next side and bunker walls and next floor racks is frozen from 2 inches into crates in top layer to 12 inches in bottom layer crates next sidewalls and up from racks affecting tops and some roots and so located as to indicate freezing occurred in car. Remainder of roots firm. Remainder tops fresh and show good green color. No decay.

Grade: Now fails to grade U. S. No. 1, only account of frozen stock.

4. **Size:** Roots generally from 3/4 to 2 inches in diameter with average approximately 15% under 1 inch, including 3% under 3/4 inch. Full tops, 16 to 20 inches in length.
- Quality:** Roots are clean, fairly well to well, mostly well colored, mostly well formed and smooth, many well formed and fairly smooth. Grade defects from 3 to 25%, average approximately 12% including 3% serious damage. Defects consist of 6% growth cracks and misshapen, 4% sunburn, remainder worm damage.
- Condition:** Roots are mostly firm. In most samples none, in many 3 to 25%, average approximately 15%, flabby and wilted roots scattered through packs and load. Tops mostly fresh and mostly show good green color. From 5 to 40%, average approximately 25% of bunches damaged by some to many yellow or brown discolored, and/or water-soaked leaves. No decay.
- Grade:** Fails to grade U. S. No. 1 on account of grade defects in excess of the tolerance but roots average approximately 70% U. S. No. 1 quality.

(151)

Short Trimmed Tops

5. **Size:** Generally 3/4 to 1-1/2, mostly 1 to 1-1/2 inches in diameter, 2% undersize. Leafstems generally 3 to 5 inches in length with 5 to 20%, average approximately 15% with leafstems over 4 inches, including 3% over 5 inches in length.
- Quality:** Roots clean, smooth, well formed, mostly well, many fairly well colored. Grade defects average 5%.
- Condition:** Roots are firm. Leafstems fresh and light green color. No decay.
- Grade:** Fails to grade U. S. No. 1 account leafstems over 4 inches in length in excess of the tolerance.

TABLE OF SIZE REQUIREMENTS

(152)

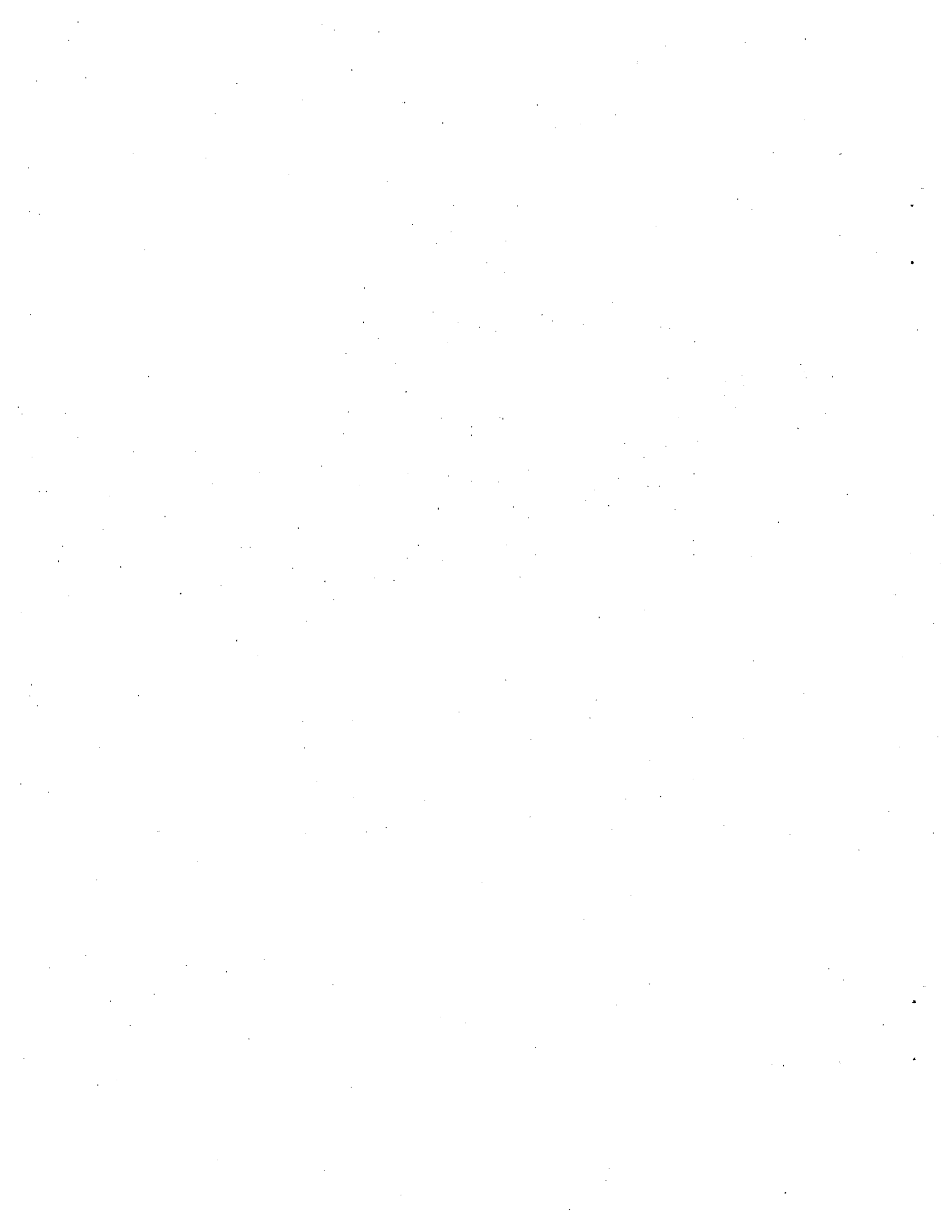
U. S. Standards		Min. Diam.	Max. Diam	Min. Length	Max. Top Length or Leafstems
Topped	- U.S. Extra No. 1	3/4"	1-1/2"	5"	1"
	U.S. No. 1 & 2	1"	3"	3"	1"
Bunched	- U.S. No. 1 and				
	U. S. Com'l.	3/4"	0	0	20"
Short Trimmed Tops	- U. S. No. 1 and				
	U. S. Com'l.	3/4"	0	0	4"

TABLE OF TOLERANCES FOR CARROTS

(153)

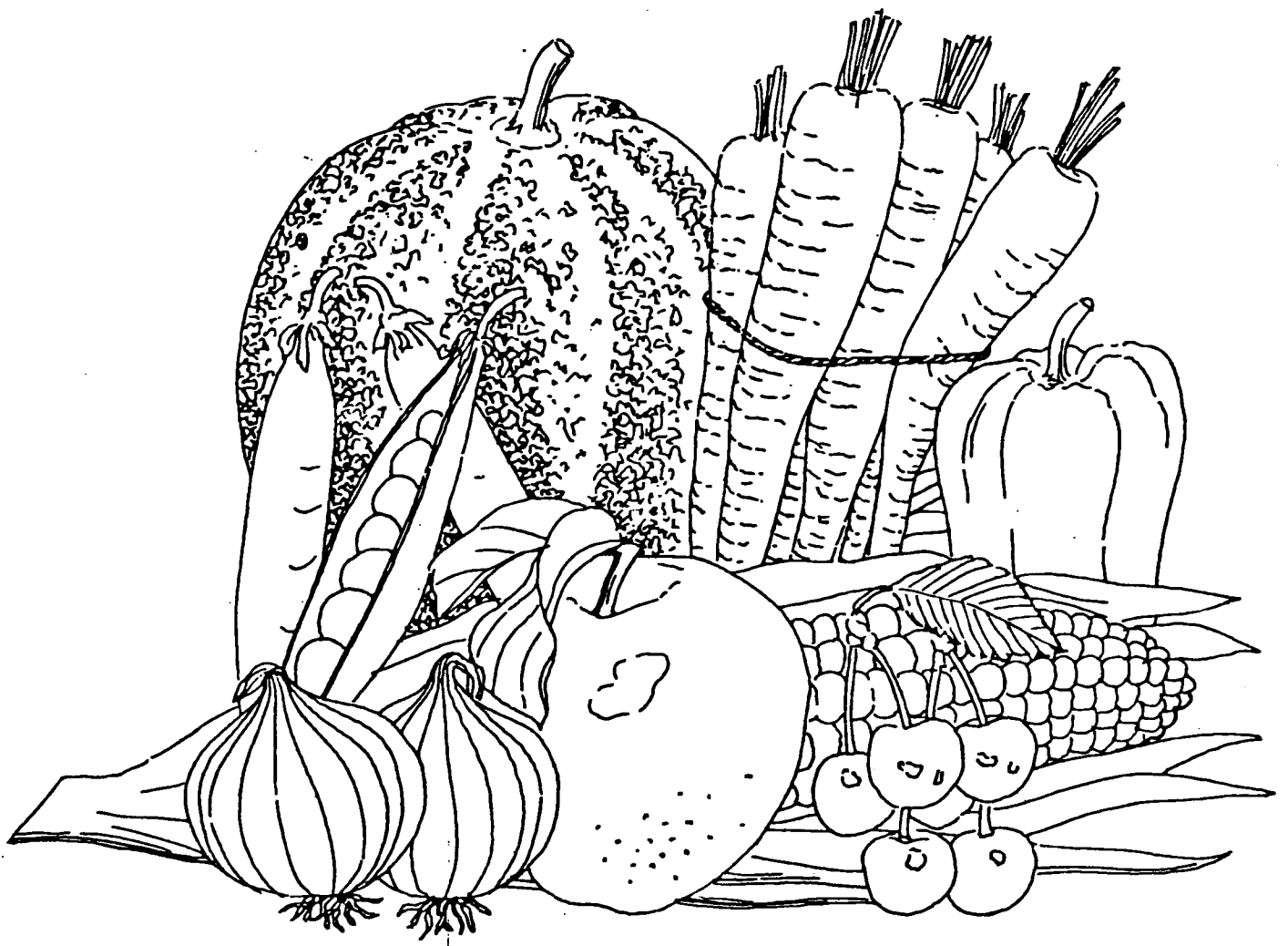
U. S. Standards	Tolerances for Roots						Tolerances for Tops or Leafstems		
	Total Defects	Ser. Dam.	Soft Rot	Under Diam.	Under Length	Over Diam.	Defects of Tops or Leafstems	Decay of Tops	Off size of Tops or Leafstems
Topped - U.S. Extra No. 1 U.S. No. 1 U.S. No. 2	10%	5%	1%	5%	5%	10%	---	---	---
	10%	5%	2%	5%	5%	10%	---	---	---
	10%	10%	2%	5%	5%	10%	---	---	---
Bunched- U. S. No. 1 U. S. Com.	10%	5%	1%	5%	---	10%	10%	5%	25%
	20%	10%	1%	5%		10%	10%	5%	25%
Short Trimmed - U. S. No. 1 U. S. Com'l. Tops	10%	5%	1%	5%		10%	10%	5%	10%
	20%	10%	1%	5%		10%	10%	5%	10%

* * * *

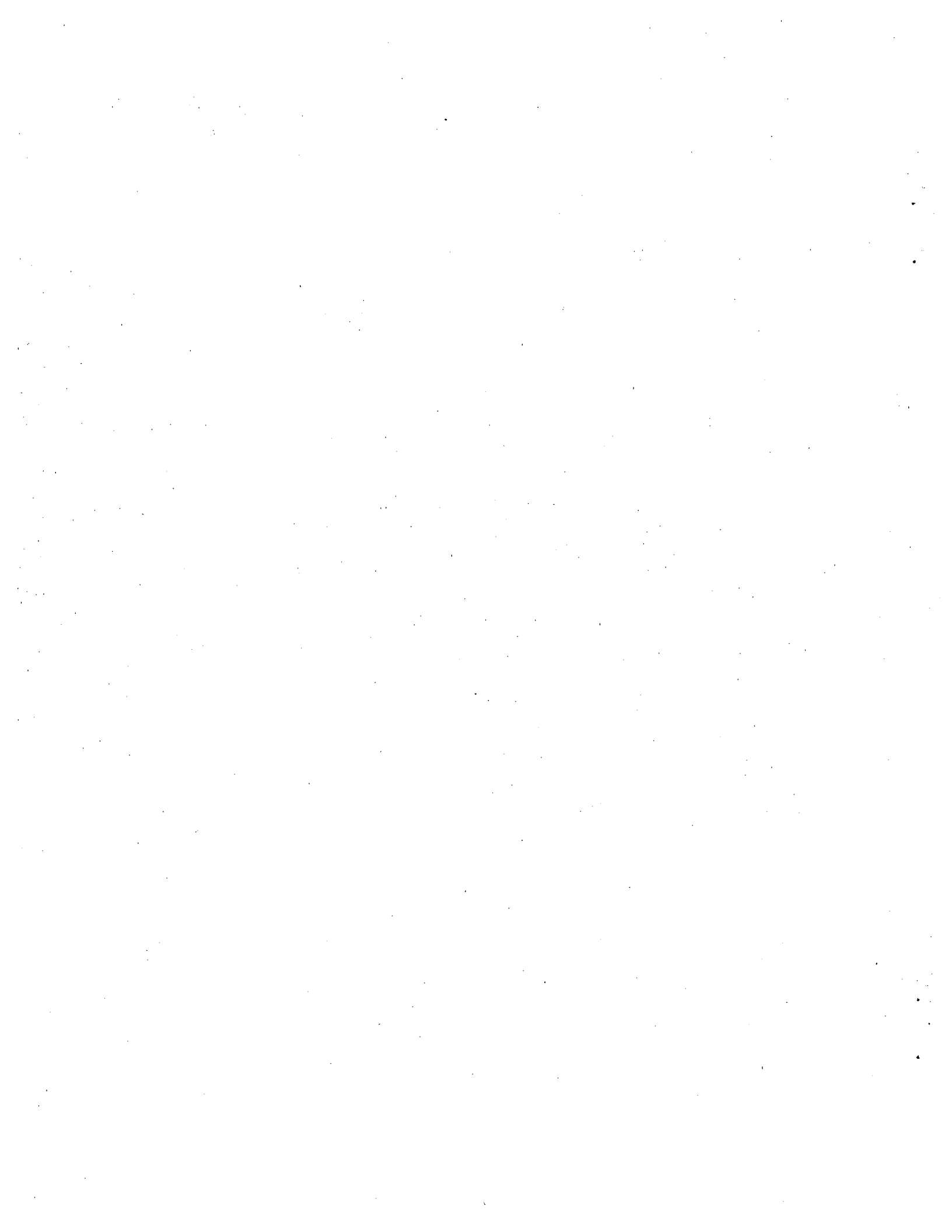


Appendix I

United States Standards



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UNITED STATES STANDARDS FOR GRADES OF
BUNCHED CARROTS¹

SOURCE: 19 FR 5202, Aug. 18, 1954, unless
otherwise noted. Redesignated at 42 FR
32514, June 27, 1977.

Effective September 18, 1954

Sec.	GRADES
2851.2455	U.S. No. 1.
2851.2456	U.S. Commercial.

UNCLASSIFIED

2851.2457	Unclassified.
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APPLICATION OF TOLERANCES

2851.2458	Application of tolerances.
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LENGTH OF TOPS

2851.2459	Length of tops.
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STANDARD BUNCHES

2851.2460	Standard bunches.
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DEFINITIONS

2851.2461	Similar varietal characteristics.
2851.2462	Firm.
2851.2463	Fairly clean.
2851.2464	Fairly well colored.
2851.2465	Fairly smooth.
2851.2466	Well formed.
2851.2467	Damage.
2851.2468	Fresh.
2851.2469	Full tops.
2851.2470	Diameter.
2851.2471	Serious damage.

AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 2851.2455	U.S. No. 1.
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"U.S. No. 1" consists of carrots of similar varietal characteristics the roots of which are firm, fairly clean, fairly well colored, fairly smooth, well

formed, and which are free from soft rot, and free from damage caused by freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or mechanical or other means. Bunches shall have tops which are fresh and free from decay and free from damage caused by freezing, seed-stems, yellowing or other discoloration, disease, insects or mechanical or other means. Unless otherwise specified, the bunches shall have full tops and the length of tops shall be not more than 20 inches. (See § 2851.2459.)

(a) *Size.* Unless otherwise specified, the diameter of each carrot shall be not less than three-fourths inch.

(b) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances shall be permitted:

(1) *For defects of roots.* 10 percent, by count, for carrot roots in any lot which fail to meet the requirements of the grade, other than for size: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than one percent for carrot roots affected by soft rot;

(2) *For defects of tops.* 10 percent, by count, for bunches in any lot which fail to meet the requirements of the grade, including therein not more than 5 percent for decay;

(3) *For off-length tops.* 25 percent, by count, for bunches in any lot which have tops longer than the specified length; and,

(4) *For off-size roots.* 5 percent, by count, for carrot roots in any lot which are smaller than the specified minimum diameter, and 10 percent, by

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

count, for carrot roots which are larger than any specified maximum diameter.

§ 2851.2456 U.S. Commercial.

"U.S. Commercial" consists of carrots which meet the requirements of U.S. No. 1 except for the increased tolerance for defects of the roots specified below:

(a) *Tolerances.* In order to allow for variations incident to proper grading and handling the following tolerances shall be permitted:

(1) *For defects of roots.* 20 percent, by count, for carrot roots in any lot which fail to meet the requirements of the grade, other than for size: *Provided*, That not more than one-half of this amount, or 10 percent, shall be allowed for defects causing serious damage, including therein not more than 1 percent for carrot roots affected by soft rot;

(2) *For defects of tops.* 10 percent, by count, for bunches in any lot which fail to meet the requirements of the grade, including therein not more than 5 percent for decay;

(3) *For off-length tops.* 25 percent, by count, for bunches in any lot which have tops longer than the specified length; and,

(4) *For off-size roots.* 5 percent, by count, for carrot roots in any lot which are smaller than the specified minimum diameter, and 10 percent, by count, for carrot roots which are larger than any specified maximum diameter.

UNCLASSIFIED

§ 2851.2457 Unclassified.

"Unclassified" consists of carrots which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

§ 2851.2458 Application of tolerances.

(a) The contents of individual packages in the lot, based on sample inspection, are subject to the following

limitations, provided the averages for the entire lot are within the tolerances specified for the grade:

(1) For a tolerance of 10 percent or more, individual packages in any lot shall have not more than one and one-half times the tolerance specified, except that at least one defective and one off-size specimen may be permitted in a package; and,

(2) For a tolerance of less than 10 percent, individual packages in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in a package.

LENGTH OF TOPS

§ 2851.2459 Length of tops.

In addition to the statement of grade, the length of tops may be specified in accordance with the following length classifications:

Short	Medium	Long	Extra long
Under 12 inches.	12 to 16 inches, inclusive.	Over 16 to 20 inches, inclusive.	Over 20 in.

STANDARD BUNCHES

§ 2851.2460 Standard bunches.

(a) When specified as "standard bunches" the carrots shall meet the following requirements:

(1) Each bunch of carrots including tops, shall weigh not less than 1 pound and contain at least 4 carrots;

(2) When the diameter of the smallest carrot in the bunch is less than 1¼ inches, not over one-fourth inch variation in the size of carrots in the bunch shall be permitted;

(3) When the diameter of the smallest carrot in the bunch is 1¼ to 1½ inches, inclusive, not over three-eighths inch variation in the size of carrots in the bunch shall be permitted; and,

(4) When the diameter of the smallest carrot in the bunch is larger than 1½ inches, not over one-half inch variation in the size of carrots in the bunch shall be permitted.

(b) In order to allow for variations incident to proper bunching not more than 10 percent, by count, of the bunches may fail to meet the requirements for "standard bunches."

DEFINITIONS

§ 2851.2461 Similar varietal characteristics.

"Similar varietal characteristics" means that the carrots in any lot are of the same general type. For example, carrots with a short, but blunt growth, like the Oxheart variety, shall not be mixed with long or half-long carrots, like the Emperor or Danvers varieties.

§ 2851.2462 Firm.

"Firm" means that the carrot is not soft, flabby, or shriveled.

§ 2851.2463 Fairly clean.

"Fairly clean" means that the individual carrot is reasonably free from dirt, stain or other foreign matter and that the general appearance of the carrots in the lot is not more than slightly affected.

§ 2851.2464 Fairly well colored.

"Fairly well colored" means that the carrot has an orange, orange red, or orange scarlet color, but not a pale orange or distinct yellow color.

§ 2851.2465 Fairly smooth.

"Fairly smooth" means that the carrot is not rough, ridged, or covered with secondary rootlets to the extent that the appearance is materially affected.

§ 2851.2466 Well formed.

"Well formed" means that the carrot is not forked, or misshapen to the extent that the appearance is more than slightly affected.

§ 2851.2467 Damage.

"Damage" means any defect which materially affects the appearance, or

the edible or shipping quality of the individual carrot root, or the general appearance of the carrot roots in the container, or causes a loss of more than 3 percent, by weight, in the ordinary preparation for use, or which materially affects the appearance or shipping quality of the tops. 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) Growth cracks which are not shallow or not smooth, or which materially affect the appearance of the carrot;

(b) Sunburn which causes a loss of more than 3 percent, by weight, in the ordinary preparation for use, except that superficial light green color at the stem end which does not materially affect the appearance of the root shall be permitted; and,

(c) Yellowing or other discoloration or injury to the tops when the appearance of the bunch is materially affected. The appearance of the individual bunch shall be considered materially affected when the tops are trimmed to the extent that only a relatively few leaves remain. The appearance of bunches with tops having slight discoloration such as yellowing, browning or other abnormal color affecting a few leaflets shall not be considered materially affected if the tops as a whole show a predominantly normal green color.

§ 2851.2468 Fresh.

"Fresh" means that the tops are not badly wilted.

§ 2851.2469 Full tops.

"Full tops" means that the leafstems have not been cut back, but dried or damaged leaves or leafstems may have been removed.

§ 2851.2470 Diameter.

"Diameter" means the greatest dimension of the root measured at right angles to the longitudinal axis.

§ 2851.2471 Serious damage.

"Serious damage" means any defect which seriously affects the appearance, or the edible or shipping quality of the individual carrot or the general appearance of the carrots in the container, or causes a loss of more than 20 percent, by weight, in the ordinary preparation for use.

Dated August 12, 1954.

[SEAL] ROY W. LENNARTSON,
*Deputy Administrator,
Marketing Services.*

[F. R. Doc. 54-6407: Filed, Aug. 17, 1954;
8:53 a. m.]

**UNITED STATES STANDARDS FOR GRADES OF
TOPPED CARROTS¹**

SOURCE: 30 FR 14519, Nov. 20, 1965, unless
otherwise noted. Redesignated at 42 FR
32514, June 27, 1977 and at 46 FR 63203,
Dec. 31, 1981.

Effective December 20, 1965

GRADES	
Sec.	
51.2360	U.S. Extra No. 1.
51.2361	U.S. No. 1.
51.2362	U.S. No. 1 Jumbo.
51.2363	U.S. No. 2.
UNCLASSIFIED	
51.2364	Unclassified.
TOLERANCES	
51.2365	Tolerances.
APPLICATION OF TOLERANCES	
51.2366	Application of tolerances.
SAMPLE FOR GRADE DETERMINATION	
51.2367	Sample for grade determination.
STANDARD SIZING	
51.2368	Standard sizing.
DEFINITIONS	
51.2369	Similar varietal characteristics.
51.2370	Well trimmed.
51.2371	Firm.
51.2372	Clean.
51.2373	Fairly well colored.
51.2374	Fairly smooth.
51.2375	Well formed.
51.2376	Secondary new top growth.
51.2377	Damage.
51.2378	Diameter.
51.2379	Length.
51.2380	Fairly clean.
51.2381	Fairly well formed.
51.2382	Excessively rough.
51.2383	Seriously misshapen.
51.2384	Serious damage.

AUTHORITY: The provisions of this subpart issued under secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 51.2360 U.S. Extra No. 1.

"U.S. Extra No. 1" consists of carrots of similar varietal characteristics which are well trimmed, firm, clean, fairly well colored, fairly smooth, well formed;

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

which are free from secondary new top growth and soft rot, and free from damage caused by freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or other means. (See § 51.2365.)

(a) *Size.* The diameter of each carrot is not less than $\frac{3}{4}$ inch or more than $1\frac{1}{2}$ inches, and the length is not less than 5 inches. (See § 51.2365.)

§ 51.2361 U.S. No. 1.

"U.S. No. 1" consists of carrots of similar varietal characteristics which are well trimmed, firm, fairly clean, fairly well colored, fairly smooth, fairly well formed; which are free from soft rot, and free from damage caused by freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or other means. (See § 51.2365.)

(a) *Size.* Unless otherwise specified, the diameter of each carrot is not less than $\frac{3}{4}$ inch or more than $1\frac{1}{2}$ inches, and the length is not less than 5 inches. (See § 51.2365.)

§ 51.2362 U.S. No. 1 Jumbo.

"U.S. No. 1 Jumbo" consists of carrots which meet all requirements of the U.S. No. 1 grade except for size. (See § 51.2365.)

(a) *Size.* The diameter of each carrot is not less than 1 inch or more than $2\frac{1}{2}$ inches, and the length is not less than 5 inches. (See § 51.2365.)

§ 51.2363 U.S. No. 2.

"U.S. No. 2" consists of carrots of similar varietal characteristics which are well trimmed, firm, not excessively rough, not seriously misshapen; which are free from soft rot, and free from serious damage caused by dirt, freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or other means. (See § 51.2365.)

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(a) *Size.* Unless otherwise specified, the diameter of each carrot is not less than 1 inch or more than 3 inches, and the length is not less than 3 inches. (See § 51.2365.)

UNCLASSIFIED

§ 51.2364 Unclassified.

"Unclassified" consists of carrots which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no grade has been applied to the lot.

TOLERANCES

§ 51.2365 Tolerances.

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

(a) *Defects*—(1) *U.S. Extra No. 1 grade.* Ten percent for carrots in any lot which fail to meet the requirements of this grade: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than 1 percent for carrots affected by soft rot.

(2) *U.S. No. 1 and U.S. No. 1 Jumbo grades.* Ten percent for carrots in any lot which fail to meet the requirements of the grade: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than 2 percent for carrots affected by soft rot.

(3) *U.S. No. 2 grade.* Ten percent for carrots which fail to meet the requirements of this grade, including therein not more than 2 percent for carrots affected by soft rot.

(b) *Off-size.* (1) Five percent for carrots in any lot which are larger than the specified maximum diameter; and

(2) Ten percent for carrots in any lot which are smaller than the specified minimum diameter or shorter than the specified minimum length.

APPLICATION OF TOLERANCES

§ 51.2366 Application of tolerances.

Individual samples shall not have more than double the tolerance specified: *Provided*, That not more than one carrot which is frozen or affected by soft rot may be permitted in any package weighing approximately 3 pounds or less: *And provided further*, That the averages for the entire lot are within the tolerances specified for the grade.

SAMPLE FOR GRADE DETERMINATION

§ 51.2367 Sample for grade determination.

Each sample shall consist of 50 carrots. When individual packages contain at least 50 carrots, the sample is drawn from one package; when individual packages contain less than 50 carrots, a sufficient number of adjoining packages are opened to form a 50 carrot sample.

STANDARD SIZING

§ 51.2368 Standard sizing.

(a) Packages of carrots containing 2 pounds or less may be certified as "standard sizing," provided the variation in diameter of the carrots in any individual package is not more than three-eighths inch and the variation in length is not more than 2½ inches.

(b) Not more than 10 percent of the packages in any lot may fail to meet the requirements for "standard sizing."

DEFINITIONS

§ 51.2369 Similar varietal characteristics.

"Similar varietal characteristics" means that the carrots in any lot are of the same general type. For example, carrots with a short, but blunt growth like the Oxheart variety, shall not be mixed with long or half-long carrots like the Emperor or Danvers varieties.

§ 51.2370 Well trimmed.

"Well trimmed" means that the tops are cut back to not more than 1 inch in length, except that new leaves developing within the original central cluster of leafstems, or occasional uncut leaves or leafstems, exceeding this length which do not materially affect the appearance of the individual carrot shall be permitted. Carrots may have tips of roots cut or broken off: *Provided*, That these cuts or breaks are small and fairly smooth and do not materially affect the appearance of the individual carrot.

§ 51.2371 Firm.

"Firm" means that the carrot is not soft, flabby or shriveled.

§ 51.2372 Clean.

"Clean" means that the individual carrot is practically free from dirt and other foreign matter.

§ 51.2373 Fairly well colored.

"Fairly well colored" means that the carrot has an orange, orange red, or orange scarlet color, but not a pale orange or distinct yellow color.

§ 51.2374 Fairly smooth.

"Fairly smooth" means that the individual carrot is not rough, ridged, or covered with secondary rootlets to the extent that the appearance is materially affected.

§ 51.2375 Well formed.

"Well formed" means that the individual carrot is not forked, or misshapen to the extent that the appearance is more than slightly affected.

§ 51.2376 Secondary new top growth.

"Secondary new top growth" means new leaves or clusters of leaves which have developed outside the original central cluster of leafstems.

§ 51.2377 Damage.

"Damage" means any specific defect described in this section; 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 shipping quality of the individual carrot or the appearance of the sample as a whole, or which cannot be removed without a loss of more than 5 percent, by weight, in the ordinary preparation for use. The following specific defects shall be considered as damage:

(a) Growth cracks which are not shallow or not smooth, or which materially detract from the appearance of the individual carrot;

(b) Sunburn which causes a loss of more than 5 percent, by weight, in the ordinary preparation for use, except that superficial light green color at the stem end which does not materially detract from the appearance of the carrot shall be permitted.

§ 51.2378 Diameter.

"Diameter" means the greatest dimension of the carrot measured at right angles to the longitudinal axis.

§ 51.2379 Length.

"Length" means the greatest dimension of the carrot measured from the crown to the lowest point which is not less than one-fourth inch in diameter.

§ 51.2380 Fairly clean.

"Fairly clean" means that the individual carrot is reasonably free from dirt and other foreign matter.

§ 51.2381 Fairly well formed.

"Fairly well formed" means that the individual carrot is not forked, or misshapen to the extent that the appearance is materially affected.

§ 51.2382 Excessively rough.

"Excessively rough" means that the individual carrot is rough or ridged to the extent that the appearance is seriously affected.

§ 51.2383 Seriously misshapen.

"Seriously misshapen" means that the individual carrot is forked or misshapen to the extent that the appearance is seriously affected.

§ 51.2384 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or shipping quality of the individual carrot or the appearance of the sample as a whole, or which cannot be removed without a loss of more than 20 percent, by weight, in the ordinary preparation for use.

The United States Standards for Grades of Topped Carrots contained in this subpart shall become effective December 20, 1965, and will thereupon supersede the United States Standards for Topped Carrots which have been in effect since July 17, 1954 (7 CFR 51.2360-51.2381).

Dated: November 17, 1965.

G. R. GRANGE,
Deputy Administrator,
Marketing Services.

[F.R. Doc. 65-12514; Filed, Nov. 19, 1965;
8:49 a.m.]

CONVERSION TABLE						
Inches		Millimeters (mm)		Inches		Millimeters (mm)
1/8	=	3.2		1	=	25.4
1/4	=	6.4		1-1/4	=	31.8
3/8	=	9.5		1-1/2	=	38.1
1/2	=	12.7		1-3/4	=	44.4
5/8	=	15.9		2	=	50.8
3/4	=	19.0		3	=	76.2
7/8	=	22.2		4	=	101.6

**UNITED STATES STANDARDS FOR GRADES OF
CARROTS WITH SHORT TRIMMED TOPS¹**

SOURCE: 19 FR 5203, Aug. 18, 1954, unless
otherwise noted. Redesignated at 42 FR
32514, June 27, 1977, and at 46 FR 63203,
Dec. 31, 1981.

Effective September 18, 1954

GRADES	
Sec.	
51.2485	U. S. No. 1.
51.2486	U. S. Commercial.
UNCLASSIFIED	
51.2487	Unclassified.
APPLICATION OF TOLERANCES	
51.2488	Application of tolerances.
STANDARD SIZING	
51.2489	Standard sizing.
DEFINITIONS	
Sec.	
51.2490	Similar varietal characteristics.
51.2491	Firm.
51.2492	Fairly clean.
51.2493	Fairly well colored.
51.2494	Fairly smooth.
51.2495	Well formed.
51.2496	Damage.
51.2497	Diameter.
51.2498	Serious damage.

AUTHORITY: §§ 51.2485 to 51.2498 issued
under sec. 205, 60 Stat. 1000, 7 U. S. C. 1624.

GRADES

§ 51.2485 *U. S. No. 1*. "U. S. No. 1" consists of carrots of similar varietal characteristics the roots of which are firm, fairly clean, fairly well colored, fairly smooth, well formed, and which are free from soft rot and free from damage caused by freezing, growth cracks, sunburn, pithiness, woodiness, internal discoloration, oil spray, dry rot, other disease, insects or mechanical or other means. The carrots shall have leafstems which are free from decay and free from damage caused by freezing, seedstems, yellowing or other discoloration, disease, insects or mechanical or other means. The leafstems shall be cut back to not more than 4 inches in length.

(a) *Size*. Unless otherwise specified, the diameter of each carrot shall be not less than three-fourths inch.

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

(b) *Tolerances*. In order to allow for variations incident to proper grading and handling the following tolerances shall be permitted:

(1) *For defects of roots*. 10 percent, by count, for carrot roots in any lot which fail to meet the requirements of the grade, other than for size: *Provided*, That not more than one-half of this amount, or 5 percent, shall be allowed for defects causing serious damage, including therein not more than 1 percent for carrot roots affected by soft rot;

(2) *For defects of leafstems*. 10 percent, by count, for carrots in any lot which have leafstems which fail to meet the requirements of the grade, including therein not more than 5 percent for leafstems affected by decay;

(3) *For off-size roots*. 5 percent, by count, for carrot roots in any lot which are smaller than the specified minimum diameter, and 10 percent, by count, for carrot roots which are larger than any specified maximum diameter; and,

(4) *For off-length leafstems*. 10 percent, by count, for carrots in any lot which have leafstems longer than the specified maximum length.

§ 51.2486 *U. S. Commercial*. "U. S. Commercial" consists of carrots which meet the requirements of U. S. No. 1 except for the increased tolerance for defects of the roots specified below:

(a) *Tolerances*. In order to allow for variations incident to proper grading and handling the following tolerances shall be permitted:

(1) *For defects of roots*. 20 percent, by count, for carrot roots in any lot which fail to meet the requirements of the grade, other than for size: *Provided*, That not more than one-half of this amount, or 10 percent, shall be allowed for defects causing serious damage, including therein not more than 1 percent for carrot roots affected by soft rot;

(2) *For defects of leafstems*. 10 percent, by count, for carrots in any lot which have leafstems which fail to meet the requirements of the grade, including therein not more than 5 percent for leafstems affected by decay;

(3) For off-size roots. 5 percent, by count, for carrot roots in any lot which are smaller than the specified minimum diameter and 10 percent, by count, for carrot roots which are larger than any specified maximum diameter; and,

(4) For off-length leafstems. 10 percent, by count, for carrots in any lot which have leafstems longer than the specified maximum length.

UNCLASSIFIED

§ 51.2487 *Unclassified.* "Unclassified" consists of carrots which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no grade has been applied to the lot.

APPLICATION OF TOLERANCES

§ 51.2488 *Application of tolerances.*

(a) The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations, provided the averages for the entire lot are within the tolerances specified for the grade:

(1) For packages which contain more than 5 pounds and a tolerance of 10 percent or more is provided, individual packages in any lot shall have not more than one and one-half times the tolerance specified. For packages which contain more than 5 pounds and a tolerance of less than 10 percent is provided, individual packages in any lot shall have not more than double the tolerance specified except that at least one defective specimen shall be permitted in a package; and,

(2) For packages which contain 5 pounds or less, individual packages in any lot are not restricted as to the percentage of defects: *Provided*, That not more than one carrot which is frozen or affected by soft rot may be permitted in any package.

STANDARD SIZING

§ 51.2489 *Standard sizing.* (a) Carrots in packages of 2 pounds or less may be certified as "Standard Sizing", provided the variation in diameter of the carrots in any individual package is not more than three-eighths inch and the variation in length is not more than 2½ inches.

(b) Not more than 20 percent of the packages in any lot may contain carrots which fail to meet the requirements for "Standard Sizing".

DEFINITIONS

§ 51.2490 *Similar varietal characteristics.* "Similar varietal characteristics" means that the carrots in any lot are of the same general type. For example, carrots with a short, but blunt growth, like the Oxheart variety, shall not be mixed with long or half-long carrots, like the Emperor or Danvers varieties.

§ 51.2491 *Firm.* "Firm" means that the carrot is not soft, flabby or shriveled.

§ 51.2492 *Fairly clean.* "Fairly clean" means that the individual carrot is reasonably free from dirt, stain or other foreign matter and that the general appearance of the carrots in the lot is not more than slightly affected.

§ 51.2493 *Fairly well colored.* "Fairly well colored" means that the carrot has an orange, orange red, or orange scarlet color, but not a pale orange or distinct yellow color.

§ 51.2494 *Fairly smooth.* "Fairly smooth" means that the carrot is not rough, ridged, or covered with secondary rootlets to the extent that the appearance is materially affected.

§ 51.2495 *Well formed.* "Well formed" means that the carrot is not forked, or misshapen to the extent that the appearance is more than slightly affected.

§ 51.2496 *Damage.* "Damage" means any defect which materially affects the appearance, or the edible or shipping quality of the individual carrot root or the general appearance of the carrot roots in the container, or causes a loss of more than 3 percent, by weight, in the ordinary preparation for use, or which materially affects the appearance or shipping quality of the leafstems. 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) Growth cracks which are not shallow or not smooth, or which materially affect the appearance of the carrot;

(b) Sunburn which causes a loss of more than 3 percent, by weight, in the ordinary preparation for use, except that superficial light green color at the stem end which does not materially affect the appearance of the root shall be permitted; and,

(c) Yellowing or other discoloration or injury to the leafstems when the appearance of the leafstems is materially affected.

§ 51.2497 *Diameter*. "Diameter" means the greatest dimension of the root measured at right angles to the longitudinal axis.

§ 51.2498 *Serious damage*. "Serious damage" means any defect which seriously affects the appearance, or the edible or shipping quality of the individual carrot or the general appearance of the carrots in the container, or causes a loss of more than 20 percent, by weight, in the ordinary preparation for use.

Dated: AUGUST 12, 1954.

[SEAL] ROY W. LENNARTSON,
*Deputy Administrator,
Marketing Services.*

[F. R. Doc. 54-6408; Filed, Aug. 17, 1954;
8:53 a. m.]