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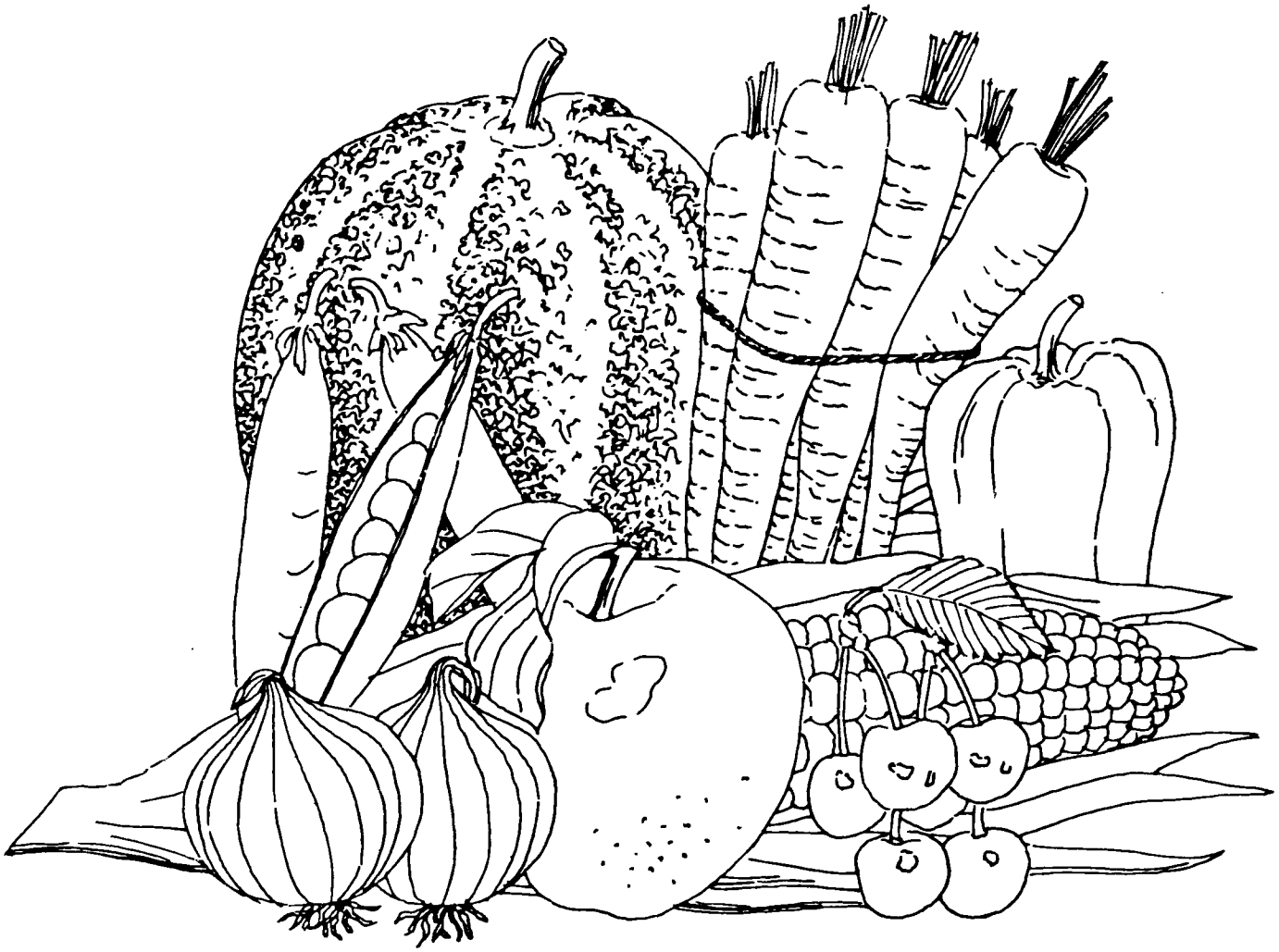
Artichokes, Chestnuts, Coconuts, Horseradish Roots, Okra and Rhubarb

Market Inspection Instructions



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

MARKET INSPECTION INSTRUCTIONS

FOR

MISCELLANEOUS PRODUCTS

ARTICHOKES, COCONUTS, CHESTNUTS 1/

OKRA, RHUBARB, AND HORSERADISH ROOTS 2/

SECTION I

ARTICHOKES

Producing Areas and Types. The commercial production of the Globe Artichoke is limited in this country almost exclusively to the six Central coast counties of California from Marin to Santa Barbara, with approximately half being produced in Monterey County. (1)

The Globe Artichoke should not be confused with the Jerusalem Artichoke which is a root crop. Varieties of Globe Artichoke are not clearly defined as no systematic breeding or selection work has been done in this field, however, there are two general types of varietal classifications of Artichokes: (2)

The Italian type in which the bud is long and somewhat pointed. This is by far the most popular type. (3)

1/ This handbook supersedes "Market Inspection of Miscellaneous Products - Artichokes, Avocados, Coconuts, Cranberries and Chestnuts" issued April 1953, reissued October 1956 and reprinted March 1966.

2/ These instructions do not establish a new or revised substantive rule (United States Standards for Grades of Globe Artichokes, CFR §§51.3785 - 51.3796; Grades of Horseradish Roots, CFR §§51.3900 - 51.3918; Grades of Okra, CFR §§51.3945 - 51.3948; and Grades of Rhubarb (Field Grown), CFR §§51.3665 - 51.3683.

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(4) The French type, in which the bud is short, chunky and almost round or is flattened on the end. This type of not generally considered desirable because it does not yield well and is difficult to pack.

(5) The harvesting period for Globe Artichokes is from August to May with peaks in October and November, and again in March and April.

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

See Destination Market Handbook - Part II (Same headings).

(7) PRODUCTS INSPECTED AND DISTINGUISHING MARKS

Variety: No attempt should be made to identify variety. It is permissible to report the type but usually simply "Globe Artichokes" will be sufficient.

8) Type of Containers: Practically all artichokes are shipped in one of three containers:

Standard Box ----------	9-3/4 x 11 x 20-5/8 inches
Standard Half Box --------	4-7/8 x 11 x 20-5/8 inches
Special Box ----------	7 x 11 x 20-5/8 inches

Identifying Brands and Marks: These should be reported under this heading on the certificate. Also show quantity inspected. See Destination Market Handbook, Part II. (9)

Example: GLOBE ARTICHOKES in standard boxes labeled "Monterey Brand, California" and stamped to indicate count (72s to 96s noted). Manifested as 325 boxes. (10)

CONDITION OF LOAD AND CONTAINERS (11)

See Destination Market Handbook, Part II.

PACK

There are no standard pack arrangements for artichokes so there is no way of telling the count from the arrangement on the top or side of the box. Any layer arrangement is used which will give a well filled box. The Standard Box and the Standard Half Box are packed with a bulge but the Special Box is packed with a flat pack. (12)

The terms tight, fairly tight, slightly slack and slack may be used to describe the pack of artichokes, See definition of these terms in Destination Market Handbook, Part II. (13)

TEMPERATURE

See Destination Market Handbook, Part II. (14)

SIZE

(15) U.S. No.1 and U.S. No. 2 grades require artichokes must be fairly uniform in size. Which means that not more than 10%, by count of the artichokes in any container may vary more than one-half inch in diameter.

(16) This requirement is applied on a container basis, not on the average for the lot. For example, if one container is found having more than the 10% variation, allowed, say 12%, then the entire lot is out of grade. Then report as "most cartons fairly uniform in size, 15% irregular." The proper grade statement would be "Fails to grade..... account of irregular sizing in some cartons.

(17) "Fairly Uniform" shall be used to describe packages that meet size requirements of the standards.

(18) "Irregular" shall be used to describe packages that fail to meet the size requirements of the standards. The number of samples or cartons failing to meet size should be reported in percentages with the proper general terms used for these samples on cartons that meet the size requirements.

Note: In order to be as accurate as possible it would be adviseable to sample the entire contents.

(19) Examples: Fairly uniform. (All samples or cartons have 10% or less of the artichokes with more than 1/2 inch in diameter variation):

Most cartons fairly uniform, 20% irregular sizing. (10 cartons sampled, with 2 cartons having more than 10% of the artichokes with more than 1/2 inch in diameter variation).

Quality

Trimming: The U.S. No. 1 grade requires that artichokes be "properly trimmed" (20)
which means that the stems should be short and clean cut. Large size buds should not have stems over 2-1/2 to 3 inches in length. Stems on smaller buds should be shorter in proportion to their size.

**** The U.S. No. 1 Long Stem grade requires the stems to be smoothly cut to a minimum length of at least 8 inches, unless specified to a longer length in connection with the grade. ****

There are no requirements for trimming in the U.S. No. 2 grade.

Shape: The U.S. No. 1 grade requires artichokes to be "fairly well formed", which is (21)
defined as not excessively long and pointed.

Slug Injury: Occurs as light to dark, shallow surface discoloration on the outer scales. (22)
The injury is judged on the basis of appearance and, as a guide, if over 10% of the outer scales show material discoloration the appearance of the bud is damaged.

Aphids: Aphids damage the appearance of artichokes by sucking out the sap to cause (23)
necrotic areas in the epidermis of the scales. When the discoloration is sufficient to materially affect the appearance or when large numbers of aphids are present, the buds should be scored as damaged.

Insect Injury: The Plum Moth is the most common pest of artichokes. The larvae (24)
attack the buds, tunneling into them and riddling the

scales. When the appearance is materially affected or the tunnels penetrate the second layer of scales, the bud should be scored as damaged.

(25) Examples:

Properly trimmed and fairly well to well formed. Grade defects within tolerance.

Generally properly trimmed and well formed. Grade defects range from 5 to 20%, average 12%, mostly discolored scars following slug injury, and poorly trimmed buds.

CONDITION

(26) Freshness: While freshness is not a grade requirement, artichokes that are a normal good green color and free from condition factors, may be described as being fresh.

(27) Compactness: Four terms may be used to describe this factor:

Compact means that the bud is firm and that the outer scales enfold the bud, at least fairly closely.

(28) Fairly Compact means that the bud is reasonably firm and not more than slightly spread. The outer scales may be slightly spread but the inner scales at the tip must be closely folded into the bud. Fairly compact is the minimum requirement of the U.S. No.1 grade.

Spread means that the scales at the tip are opening but not to the extent that the heart is exposed. (29)

Badly Spread means that practically all of the scales have spread, exposing the flower parts in the center of the bud. The U.S. No. 2 grade requires that the bud be "not badly spread." (30)

Overdeveloped: Artichokes that are overdeveloped are excluded from both the U.S. No.1 and U.S. No. 2 grades. Overdeveloped buds are brownish in color, the scales are tough, leathery and stringy, the flower in the center of the bud has turned dark pink or purple and become fuzzy. As artichokes age the thorns at the ends of the scales become hardened and protrude, however, hardened thorns do not necessarily indicate the bud is overdeveloped. A soft, flexible stem indicates that the flower parts have not become coarse or inedible. (31)

Freezing Injury: Temperatures of 30 to 31°F. will cause the epidermis of the scales to peel or feather, later becoming brown or dark in color. Severe feathering materially injuring the appearance should be scored as damage. Lower temperature will cause freezing into the stem or bud, resulting in discoloration of the flesh. Internal injury can often be detected by cutting the stem off close to the base of the bud. If internal injury is present, the fresh cut surface will show definite black discoloration. (32)

(33) Decay: The decay generally found in artichokes is Gray Mold Rot. For a description refer to Miscellaneous Publication No. 541, Market Diseases of Fruits and Vegetables.

(34) It will be noted by referring to the Standards that there is a 2 percent tolerance for decay in both the U.S. No.1 or U.S. No. 2 grades.

(35) Examples:

Generally green, fairly compact to compact. Average 2% spread and 5% overdeveloped. No decay.

Mostly green, from 5% to 15%, average 9% overdeveloped. Mostly fairly compact, from 8 to 20%, average 15% spread, including 3% badly spread. From 2 to 8%, average 5% Gray Mold Rot in early stages affecting outer layer of scales.

Fairly compact to compact. Practically all buds are damaged by brown discoloration and severe feathering of the epidermis and from 5 to 15%, average 8% of the buds show internal black discoloration characteristic of freezing injury. No decay.

GRADE

(36) Under this heading a statement should be made as to the grade of the lot based on the results of the inspection, unless the inspection was restricted to reporting condition or size only at the applicant's request. See Destination Market Handbook, Part II.

INSPECTION METHOD

In making the inspection, the container may be opened from the side or the top. In standard and special boxes about 1/4 of the contents should constitute the sample unless the lot is out of grade on account of samples exceeding the container tolerance on either grade or condition defects, in which case the entire contents should be examined. In half boxes, 1/2 of the entire contents should be examined. All percentages should be based on count as specified in the grade. (37)

SECTION II

COCONUTS

INTRODUCTION

Fresh coconuts are imported into the United States the year around. (1) Heaviest imports are received from October through December. They are grown in most of the tropical countries, however, our main sources of supply are Puerto Rico, Cuba, Central America, and the Pacific Islands. Fresh domestic shipments are generally made in heavy jute sacks although many coconuts are imported in bulk.

The nut consists of a hard woody shell enclosing the kernel or meat, (2) within which is a cavity containing coconut liquid or "milk." Covering the nut is a thick fibrous husk, however, this is generally removed unless the nuts are to be used for decorative purposes. In the shell of each nut are three "eyes", one of which is softer and more easily perforated than the others and is the one that may sprout.

Inspection Procedure. The contents of an entire sack should (3) ordinarily be the unit of inspection. In lots equivalent to a carload, at least 8 to 10 sacks should be examined and smaller lots should be sampled in proportion. A sufficient number of sacks should always be examined to give a correct analysis of any lot. Sacks for examination should be carefully selected from various parts of the load or lot in

order to secure a representative inspection. During the process of examining the contents of each sack, 5 to 10 nuts should be set aside for cracking. The remainder should be examined for visual defects and dryness. A good way to detect cracked or dry nuts is to tap two of them together; if there is a clear "ring" the nuts are either dry or cracked. The nuts should be shaken to determine whether they are dry. If there are only a few, all dry nuts should be broken to determine if the meat is also moldy or rancid; if there are many, a representative sample should be broken.

(4) The nuts set aside should be broken open regardless of whether they appear to be perfect. The amount of liquid should be noted when the nuts are broken open. Coconuts sometimes appear to be perfect and contain a good amount of liquid yet the liquid may be fermenting. Others, with no visible cracks or openings and containing sweet liquid, may show a layer of mold and decay occurring on the meat next to the side in contact with the shell. To break a coconut, it should be held in one hand and hit with a hammer, rotating it in the hand until a crack appears. All percentages reported should be based upon count.

(5) There are no U.S. Standards for Coconuts. As there are no definitions for the terms "damage" and "serious damage", these terms should not be used on the certificate, but defects should be described as to areas affected and degrees of injury. However, there are Puerto Rican

Standards for "Dry Husked Coconuts" which are similar in form to most U.S. Standards. In addition to specifications for Puerto Rican No. 1 and No. 2 grades with appropriate definitions of terms, these Standards also provide minimum and maximum diameters for various sizes.

The following terms should be used in describing parts of the coconuts: (6)

Husk: The coarse fibrous stringy material on the outside of the shell.

Shell: The hard woody shell enclosing the meat.

Eyes: The three sunken or protruding spots occurring at one end of the shell.

Meat: The white edible kernel inside the shell.

Liquid: The liquid (or coconut milk) in the center of the shell.

When making the inspection, a separate column should be kept on the notesheet for each defect, such as sprouts, rancid, etc. If one defect is predominant and excessive, it should be reported separately; or, it the applicant requestsit, all defects may be reported separately. (7)

PRODUCTS INSPECTED AND DISTINGUISHING MARKS

(8) Name of the Commodity: This should be the first item shown under the "Products" heading on the certificate, and usually the word "Coconuts" will suffice. While there are supposedly 25 to 30 varieties of Coconuts, sales are never made on the basis of variety, but rather on the country or origin, as "Puerto Rican Coconuts" or "Honduras Coconuts", etc. While each country may have a different varietal name for their coconuts, the differences in characteristics of coconuts from each country may be due largely to differences in climate and altitude rather than to being a different variety. This point is seldom in dispute except on a falling market when some dealers may claim that the coconuts are not from the country specified in the contract. The inspector should never attempt to indicate the country of origin as even coconut experts find this difficult or impossible to determine.

(9) The Type of Containers: Except for shiploads of coconuts which arrive in bulk at the port of entry, coconuts are generally shipped in heavy jute bags. Some inspectors have been reporting these as burlap sacks. While this is not technically incorrect, burlap, as a general rule, is made largely from hemp. It is preferable to describe the containers as "Heavy Jute Sacks."

Distinguishing Marks: The purpose of this is to identify the lot. The brand, if any, should be quoted, including the growers' or shippers' name and address. Other identifying marks that may be quoted are: size marks or counts, country of origin and lot number. (10)

Quantity Inspected: See Destination Market Handbook, Part II. (11)

Examples: (12)

COCONUTS in heavy jute sacks stenciled: "Product of Ecuador" and to denote count (100s noted). Sacks also tagged "Otisgolf Los Angeles, Productos De Panama." 104 sacks noted.

COCONUTS in heavy jute sacks stenciled: "Otis, Product of Honduras" and to denote count. 500 sacks applicant's count.

CONDITION OF LOAD AND CONTAINERS (13)

See Destination Market Handbook, Part II.

PACK

The Pack heading, as a general rule should be blocked out. (14)

TEMPERATURE

Ordinarily the temperature heading on coconut inspection certificates should be blocked out. Coconuts, however, are subject to freezing and freezing injury. In the northern states during the winter months, (15)

inspectors are cautioned not to overlook this factor. A few coconuts, in the bottom layer next to the doors, should be shaken to determine if the coconut milk is still in a liquid state. In the event that some appear to be frozen, temperatures should be taken of coconuts next to the floor in the doorway and in several parts of the top of the load. This is best accomplished by using a nail to puncture the soft eye of the coconut and inserting the thermometer in this eye.

SIZE

(16) Dealers generally contract for coconuts on the basis of count per sack and a minimum average net weight per sack. Coconuts are packed 60, 80, 100, 120 and 125 nuts per sack. The average net weight may vary from 140 to 170 pounds per sack. The most common size packed is 100 count and the most common weights specified are 150 or 160 pounds. As a rule, the dealers expect the size to be fairly uniform for each count and sometimes complain of the irregularity in size. Should a dealer include "Size" in his request for inspection, the variations should be reported by inches and quarters of an inch and also include a "Mostly" statement. Diameters should be determined by the maximum measurement at right angles to the longitudinal axis.

(17) If the count is in question, a range of the variations in count and an average should be reported.

Should the applicant question the average net weight, he should be required to furnish all the facilities necessary to weigh enough sacks to obtain a representative average. (18)

(19)

Examples:

Minimum diameter ranges from 3-3/4 to 5 inches, mostly 4 to 4-1/2 inches.

Fairly uniform in size.

Count varies in sacks from 94 to 103, average 98 coconuts per sack.

Net weight varies in sacks from 145 to 162 pounds, average 153 pounds.

QUALITY

Cleanness: While the possibility of coconuts being dirty is small, reporting them as "Clean" is a good description term to use if that is the fact. If some are badly stained or dirty, they should be reported with a description. (20)

Freedom from Excessive Husks: Coconuts which are exceptionally free from husks should be reported as "well husked." Coconuts which show some husks, but not sufficient to detract appreciably from their appearance, should be reported as "fairly well husked." Coconuts which show an excessive amount of husks which detract from the appearance of the individual specimen, should be reported as "poorly husked." (21)

(22) Shape: The following terms should be used in describing shape:

"Well shaped" - when the coconut has a typical oval shape.

"Fairly well shaped" - when the coconut is somewhat excessively elongated or spherical in shape.

"Misshapen" - when the coconut is so misshapen as to detract from the appearance of the individual nut.

(23) Color: The following terms should be used to describe the color of the coconuts "Light brown," "Brown," or "Dark brown" color in accordance with the facts.

(24) Thickness of Meat: If the meats have an average thickness of 1/4 to 3/8 inches, they should be reported as "Fairly thick meats." Those showing above average thickness, should be described as "Thick meats." Those showing meats definitely thin or decidedly thinner than the average, should be reported as "Thin meats." If thickness of meats is in controversy, the thickness should be reported in fractions of an inch as follows: "Meats mostly 1/4 to 3/4 inch thick, average 10% less than 1/4 inch thick." Puerto Rican No. 1 grade requires meats to be 3/8" thick.

Defects: Coconuts are not subject to many defects which would be considered as quality factors. Various factors affecting the value of the coconuts come mostly under the "Condition" heading. Under the above heading, any percentage of coconuts showing excessive amounts of husks and badly misshapen coconuts should be shown. (25)

Examples:

Clean, generally well husked, fairly well to well shaped, mostly brown, some dark brown color, generally showing fairly thick meat. (26)

Clean, mostly well husked, fairly well to well shaped, mostly light brown, some brown color, mostly fairly thick meats, some thin meats; ranging from 20 to 35%, average 30% showing dense husks 3 to 4 inches long surrounding the eyes.

CONDITION

Coconut sales are generally made on the basis of 90% sound on delivery. (27) If the condition factors mentioned below do not total more than 10%, it will not be necessary to give the percentage for each factor separately except for randidity, mold and decay of meats. The total percentage should be shown followed by the various condition factors named in the order of importance. Should the total exceed 10%, the percentage for each factor should be shown.

(28) Condition of Meat: This is in relation to freedom from rancidity, mold, and decay, and should be reported as "Meat fresh and sweet," when such is the case, or give the percentage showing meat rancid, moldy, discolored or showing decay.

(29) Liquid Content and Sweetness: The liquid content should be described in the following terms: "Moderate amount of liquid" when they show an average amount of coconut milk, "Good amount of liquid" when they show more than an average amount of milk, "Small amount of liquid" when they definitely show less than an average amount of milk. Coconuts showing fermentation of the milk should be reported in percentages as such, otherwise the word "liquid" should be preceded by the word "sweet."

(30) Cracked, Broken or Crushed: Coconuts may crack due to changes in temperatures; either very hot or very cold temperatures may cause them to crack. Cars shipped under ventilation may also show cracked nuts if the shipment passed through areas having hot dry winds. Rough handling in the process of loading or shifting of loads may cause breakage in transit.

(31) Sprouts: The fertile eye of coconuts often show a slight bulge, however, it should not be scored as sprouted unless the scale or

scab covering the eye has been broken and the white meat has become visible. Sprouts protruding from the eye will increase almost as fast in thickness as in length. As soon as a coconut sprouts, a bulb starts forming inside the coconut in contact with the sprout. Inspectors sometimes find bulbs in coconuts where no sprouts are in evidence. In those cases, the sprouts may have been broken off or eaten away by insects or rodents. When sprouts are noted, their length should be reported.

Perforated or Leaking Eyes: Cockroaches, beetles or other insests often eat through the soft (fertile) eye, leaving an opening in the coconut which causes the eye to leak and may result in the coconut being dry at the time of inspection. These should not be reported as "Insect Injury" but rather as "Perforated eyes." Such terms as "Some of which are leaking" may be added, if such is the case. (32)

Dry: This term should not be used with reference to the outside of the shells. The condition of the outer surface need not be mentioned unless it is wet or damp, in which case it should be reported as such. To a coconut dealer the expression "Stock generally dry" would indicate that the coconuts contained no liquid. Coconuts which contain no liquid (coconut milk) should be reported in percentages as "____% contain no liquid." It is also desirable to indicate the condition of the meat of these coconuts; some may be sweet and white, others may be moldy, rancid, or discolored. (33)

(34) Decay, Rancid, Moldy or Fermenting: This does not refer to coconuts which are also cracked, dry, or leaking; these should be reported as such followed by a description of the condition of the meat and liquid. The above should refer to coconuts which contain liquid and appear to be sound but upon cracking show rancidity, decay, mold or fermentation. It will not be necessary to mention the name of the disease causing the decay or mold, as this may be difficult to determine and is not important. Bacteria and yeasts are mostly responsible for the sour fermented odor sometimes encountered, Occasionally a diplodia rot that enters the soft eye causes a browning and slight blackening of the flesh inside.

(35) Freezing or Freezing Injury: The liquid in coconuts will freeze at a temperature slightly below freezing, although no damage will result to the meat or liquid at this temperature. However, coconuts with frozen liquid should be reported as such. Frozen coconuts in refrigerated cars should be reported in terms of inches up from the floor or inches in from the side walls. Coconuts may become injured by freezing if extremely low temperatures occur. A short time after such coconuts are thawed out the inside of the flesh developes a network of cracks, and when the meat is exposed to the air, these cracks turn pink. Inspectors should examine frozen coconuts very carefully for tiny cracks in the shell which may have resulted from freezing.

Examples:

(36)

"Coconuts with meat and liquid sweet and most containing a good amount of liquid, some with moderate amount of liquid, few containing small amount of liquid. Average 8% condition factors consisting of cracked coconuts containing no liquid and perforated and leaking eyes."

"Coconuts containing a moderate amount of sweet liquid, meat firm and sweet, outer surface mostly dry, some damp, a few wet. Average 5% condition factors consisting of coconuts containing no liquid, broken, rancid, and leaking eyes."

"Coconuts containing a moderate amount of sweet liquid; composite sample upon cracking average 90% showing layer of mold and decay occurring on meat where in contact with the shell."

"Coconuts mostly containing moderate amount of sweet liquid; average 35% showing sprouts from 1/4 to 3/4 inch in length with bulbs forming on the inside, average 4% other condition factors consisting of cracked, broken, and rancid."

"Coconuts containing moderate amount of sweet liquid; meat firm and sweet; average 3% condition factors consisting of cracked, leaking eyes and decay. In bottom layer of sacks, coconuts in contact with floor racks show liquid frozen, affecting coconuts from 6 to 12 inches up from floor racks."

GRADE

When inspection is requested for condition only, this heading should be blocked out, unless a "Condition Only" certificate form is used, and a statement made under "Remarks" - "At applicant's request inspection restricted to condition." (37)

(38) Applicants requesting a grade statement should be advised there are no U.S. Standards. If the coconuts are of Puerto Rican origin, or if the Puerto Rico grades are satisfactory to the applicant for reporting quality, they may be used with a notation under Remarks "Applicant requested certification on basis of Puerto Rican Standards." Otherwise a statement should be made under this heading: "No established U.S. Grades."

REMARKS

(39) See Destination Market Handbook, Part II.

FEE

(40) Fees for inspections of coconuts should be based on the schedule for fresh fruits and vegetables rather than on the rate for other nuts. Often it will be found that the hourly basis for charges will be more equitable, especially if large lots are involved.

SECTION III

CHESTNUTS

Introduction. Chestnuts are grown in various parts of the world, including the United States. Generally chestnuts are imported from Italy, with a few coming from the Far East. Chestnuts are seeds that develop inside a prickly husk, generally 2 or 3 in each husk. The nuts ripen and fall from the tree during or after the first frosts. The commercial marketing season for these nuts is generally October through December. (1)

Inspection Method. Like other nut inspections, samples should be drawn and taken to the office for analysis. Inspectors should avoid opening only a small corner of the container sufficient to insert their hand to obtain a sample. Enough of the container should be opened so that the inspector will be able to observe the general appearance of the lot and also determine if chestnuts in some containers are at great variance with others, in which case separate samples should be drawn. For a carload equivalent at least 20 containers should be sampled; these should be carefully selected from different parts of the lot or load. About half a pound should be taken from each container examined, and the composite sample taken to the office for careful analysis. (2)

(3) Samples from different grower marks or sizes or brands should be kept separate and graded separately as they will often show entirely different internal quality or condition. If after analysis the lots are found to be similar, they can be grouped and reported together on the certificate.

(4) At the office the sample should be thoroughly mixed, and for a carload equivalent at least 200 nuts should be counted out for analysis. The minimum number of nuts for an official sample should be not less than 100 nuts. These should all be cut to determine the quality and condition of the kernels. All percentages reported should be based upon count and reported to the nearest whole figure. Percentages ending in .5 should be reported in the next larger whole figure.

(5) Car Initials and Number, Kind of Car, Where Inspected, Condition of Car. Refer to General Inspection Instructions.

(6) Products Inspected and Distinguishing Marks

Name of Product. There are a great many varieties of chestnuts, but variety will probably never be in question. Chestnuts are not sold by variety but by country of origin. There are a number of varieties that are so similar that it would be difficult for an inspector to differentiate between them. The word "Italian" is not the name of a

variety, but the source of the product. They should be reported simply as "Chestnuts."

Types of Containers. Chestnuts are normally shipped in 55 pound (25 kilo) burlap (jute) sacks. The container should be described in accordance with the facts. (7)

Identifying marks. The identifying marks on the container should be reported as they appear on the container. Always include size markings, weight and country of origin, when present. (8)

Examples: (9)

Chestnuts in jute sacks printed "Product of Italy, net weight 25 kilos, LZC 552, 60 to 65, W.A. Whatilini," and tagged "Export No. 642 A."

Inspectors' count 192 sacks.

Chestnuts in burlap sacks stenciled "Product of Italy," 25 kilos net, R.C. Burnini," and tagged "45 to 50."

Applicant states 412 sacks.

CONDITION OF LOAD AND CONTAINERS AND CONDITION OF PACK

See General Inspection Instructions. Describe all unusual occurrences using general quantity terms. Such as: dampness of sacks, mold growth on sacks, the presence of ice crystals, etc. (10)

(11) TEMPERATURE OF PRODUCT

Chestnuts were not known to be subject to freezing injury but recent reports indicate that freezing or heat injury does affect the shells and kernels so therefore; temperatures should be taken at all times and unusual appearance factors reported on the note sheet and under the appropriate heading on the certificate. (See condition of shells) A.R.S. Market Research Report No. 196 indicates the freezing points of chestnuts can vary from 18.5 to 28.9 degrees F. depending on country of origin.

SIZE

(12) Chestnuts are generally packed to meet a specified count per kilo (2.2 lbs). The counts may vary depending upon the country of origin. If the inspector is not certain of the requirements he should always request additional information from the applicant. Each size should be treated as a separate lot.

(13) If diameter measurements are requested round hole sizers should be used and the largest diameter at right angle from end to end be reported. In determining count per kilo (2.2 lbs) samples should be taken and counted.

In reporting a range in diameter an occasional exceptionally large or small nut should be disregarded. If the applicant specified the size range on which he purchased the lot, the percentage over and under these size limitations should be reported. (14)

Italian laws prohibit the export shipment of chestnuts unless they are marked to size by count per kilo (2.2 lbs.). The Italian sizes in effect are as follows: (15)

38 to 40 Nuts per Kilo (2.2 lbs.)
44 to 46 Nuts per Kilo.
48 to 50 Nuts per Kilo.
50 to 55 Nuts per Kilo.
60 to 65 Nuts per Kilo.
70 to 75 Nuts per Kilo.
80 to 85 Nuts per Kilo.
85 to 90 Nuts per Kilo.
90 to 95 Nuts per Kilo.

Size requirements for nuts from the Far East are not available. Report the facts from manifests, size markings and/or requests. (16)

Count per kilo should be reported when size is marked on the containers. Chestnuts do shrink somewhat during transit but since there are no tolerances report the facts as you find them. (17)

Examples:

In lot marked "70 to 75 size" generally ranges from 1-1/2 to 2 inches in diameter. 4% under 1-1/2 inches, no oversize. Average 73 nuts per kilo. Lot marked 80 to 85: Average 83 nuts per kilo. (18)

In lot marked "38 to 40" size generally ranges from 2 to 2-1/2 inches in diameter. No offsize. Average 39 nuts per kilo.
In lot marked "60 to 65 size" generally ranges from 1-1/2 to 2 inches in diameter. 5% under 1-1/2 inches .
4% over 2 inches. Average 58 nuts per kilo.

QUALITY

(19) The following factors should be reported under the "Quality" heading of the certificate:

Cleanness

Shape

Color

Defects

(20) Cleanness. The following terms should be used in accordance with the facts as to freedom from dirt or other foreign matter: "Clean," "Fairly clean" or "Slightly dirty."

(21) Stock which shows surface mold and is otherwise free from dirt or other foreign matter should be reported as follows: "Except for mold, noted below, stock is clean."

(22) Shape. Italian chestnuts are generally flattened and irregular in shape while chestnuts from the Far East are generally spherical, similar to walnuts, and uniform. The following terms should be used to describe shape:

"Well shaped" when the chestnut is typical of the product (23)
from the country of origin.

"Fairly well shaped" when the chestnut is somewhat off shape (24)
from the general appearance of the majority of the lot.

"Poorly shaped" when the chestnut is badly deformed. (25)

Color. Uniformity of color should be reported. Chestnuts from (26)
the Far East are usually lighter brown than Italian chestnuts.
The terms "Light Brown," "Brown" or "Dark Brown" should be used
to describe color.

Defects. Since there are no U. S. grades for chestnuts the words (27)
"damaged by" should not be used in connection with defects. The
defect should be described in some detail as "affecting the
appearance," etc.

Adhering hulls. When covering a sufficient area to affect the (28)
appearance of the nut.

Worm holes. This is the most common and serious defect of chest- (29)
nuts and should always be reported as a separate percentage.
If live worms or fresh frass are present, the nuts should be
scored as a condition defect. Worms eat into the nut while
still on the tree before the shells become mature, cured and hard.

Puffy. This refers to chestnuts which have undeveloped kernels which do not adequately fill the air space in the shell. Puffy chestnuts usually collapse upon applying pressure. Chestnuts with small air spaces should not be mentioned.

Examples:

Clean, fairly well to well shaped, generally uniform dark brown color. 3% with worm holes. 5% puffy or showing adhering hulls covering 10 to 15% of the surface.

Fairly clean to clean except for mold noted under condition, well shaped, generally light brown to brown color. 8% with worm holes.

CONDITON

The following factors should be reported under this heading:

Brightness. "Bright," "Fairly Bright," or "Dull."

Dryness of shells. The terms "Dry," "Slightly Damp" or "Damp" should be used. Nuts that show surface mold should not be included in the determination of dryness. Mold often contains some moisture and feels damp to the touch. This factor should not be reported on lots which generally show surface mold.

Surface mold. Two factors should be considered in describing surface mold: quantity affected and density of mold. The

quantity affected should be reported in general terms, as: "Few," "Some," "Many" etc. or in fractions as "About 1/4, 1/3, 1/2, etc." Density of mold should be described as" "Light," "Moderate" or "Heavy" or a combination of these terms. These factors should be determined upon observation of the lot or lots as the sample or samples for size, quality and or condition are drawn and not on the sample to be examined.

Condition of sawdust. Occasionally shipments may be packed in sawdust. The condition of the sawdust is important and should be reported as "Dry," "Slightly Damp" or "Damp" in accordance with the facts. (36)

Condition of kernels. Normal kernels may be described as "Firm.". Any material departure from normal should be described. Discolored, water soaked, soft, flabby or sour odor are some of the factors affecting kernels. DO NOT USE "CHARACTERISTIC OF FREEZING" or "OVER HEATING" TO DESCRIBE KERNELS. (37)

Condition of shells. If freezing or over heating of the shipment is suspected describe the lot using general quantity terms applied to the sample drawn. (38)

(39) Cracked or open tips. Very often just before sprouting the kernel expands, causing the chestnuts to crack open, usually at the tip. These should be reported in percentages, as "cracked or open tips."

(40) Sprouting. Sprouting should only be reported when visible without cutting. This should be reported in percentages, also showing the length of the sprouts in fractions of an inch.

(41) Moldy, Decayed or Rancid Kernels. This can only be determined by cutting the sample selected for analysis. The shell of the chestnut is more or less porous and a visible opening is not necessary for the fungus to enter. However, chestnuts showing cracked shells or open tips, which also contain moldy kernels should be reported under this heading, indicating the proportion or percentage which are moldy and have cracked or open tips. Chestnuts not showing decay seldom become rancid unless stored for a very long time. The only decay known to affect Chestnuts is Blue Mold Rot. Sometimes a surface mold forms on the kernels, and it may be difficult to determine just when the fungus has gained entrance into the flesh of the kernel itself. It is, therefore, suggested that kernels showing mold be reported as "Moldy Kernels" without reference to decay.

Examples: (42)

Shells dry and bright, kernels generally firm. 3% cracked or open tips. 4% moldy kernels.

Shells slightly damp and dull, kernels firm. Approximately 1/4 of stock shows slight to heavy, mostly moderate surface mold. 2% cracked or open tips. 4% show sprouts up to 1/4 inch in length. 8% moldy kernels.

Shells fairly bright, generally damp in damp sawdust. Kernels firm. 5% moldy kernels.

GRADE

Since there are no U. S. standards for chestnuts, the following (43)
statement should be used under this heading: "No established U. S.
de."

REMARKS

(44)

See General Inspection Instructions.

GENERAL EXAMPLES

Products inspected. Chestnuts in burlap sacks branded "Bonard Brand, net wt. 55 lbs., Castagne. Product of Italy "and marked "60/65" or "80/85." Applicant states 660 sacks.

Loading. Stacked at above location.

Pack: Some sacks show light to moderate mold over 1/4 to 1/3 of surface of sack.

Size.

Quality.

Condition. Shells have ice crystals over surface with fairly bright to bright appearance.

Grade.

Remarks. Applicant states above van unloaded from s/s Great Republic. Inspection and certificate restricted to temperature, lading and external condition only at applicant's request and to product and lading in top layer of load.

Product. Chestnuts in burlap sacks branded "Cioffivito Cervinar avellino, castagne stirlizzate, S. M. Boggs, New York, Sterlized chestnuts, Product of Italy, Net weight lbs. 55, Cert. N," and marked "60/65" or 80/85." Applicant states 660 sacks.

Loading. Through lengthwise load. 4 to 7 rows, 7 layers.

Condition of Load and Containers. Eact lot: Sacks damp to wet.

Temperature. 38 to 42° F.

Size.

Quality.

Condition. Each lot: Shells mostly dry, some damp to wet with fairly bright appearance. Some shells show light to heavy, mostly moderate surface mold. 1% cracked or open tips. 2% with visible sprouts up

to 1/2 inch in length. 4% with old worm holes extending into kernels. 60/65 lot: Kernels mostly firm. 13% with soft, flabby and watersoaked kernels. 3% rancid,moldy ordecayed kernels. 80/85 lot: Kernels generally firm. 4% with soft, flabby and watersoaked kernels. 6% rancid, moldy and decayed kernels.

Grade.

Remarks. Applicant states above van unloaded from s/s Great Republic. Labor furnished by applicant to make load unrestricted. Above lot previously inspected on November 6, 1974 for external condition and reported on certificate A-41148.

Temperature. Range 58 to 59 ° F.

Size.

Quality.

Condition. Each lot: Shells fairly dry to dry and mostly fairly bright to bright, some slightly dull. Most shells show light to heavy, mostly moderately surface mold affecting from 1/4 to 1/2 of surface. Kernels mostly firm. Each lot: 3% show old worm holes extending into kernels. 60/65 lot: 28%moldy kernels. 80/85 lot: 18% moldy kernels.

Grade.

Remarks. Applicant states above lot unloaded from s/s Defiance in trailer CMLU 880212 under Bill of Lading 67.

Products. Chestnuts in burlap sacks branded "Cioffivito Cervinara avellino, castogne sterilizzate, S. M. Boggs, New York, Sterlized chestnuts, Product of Italy, net weight lb. 55; Cert. N," and marked "60/65" or "80/85." Applicant states 660 sacks.

Loading. Through lengthwise load. 4 to 7 rows, 7 layers.

Condition of Load and Containers. Each lot: Sacks generally dry, few sacks damp to wet with 1/2 to 3/4 of sack frozen with ice crystals present.

Temperature. Range from 26 to 30° F.

SECTION IV
OKRA

GENERAL

Okra, commonly called gumbo, is edible hibiscus of the Malvaceae (or Mallow) family. In this genus belong many species of ornamental flowering hibiscus, several of which are natives of the United States. Cotton is the most important economic plant belonging to the mallow family. (1)

The okra plant is an annual, requiring warm humid climates preferably where temperatures go above 85 degrees F. It is easily injured by frost. (2)

The fruit is a long pod, generally ribbed and spineless in cultivated varieties. Pods will vary in length, color and smoothness depending on the variety. (3)

TOLERANCES

The standards have only one grade, U. S. No. 1, and the tolerances for this grade are applied on the basis of weight. (4)

Defects	U. S. No. 1
A. Damage	10%
B. Serious damage (Inc. in A)	5%
C. Decay (Inc. in A&B)	1%

APPLICATION OF TOLERANCES

(5) In the absence of specific instructions as to the application of tolerances it is the general policy to apply the 1-1/2 times or 2 times the tolerance listed in the standards as described in Par. 493 of the General S.P.I. and Par. 572 of the General MKT Instructions.

PRODUCT

(6) Report the following information under this heading:

Commodity.
Type of container.
Identifying marks.
Quantity inspected.

(7) Commodity. The commodity should be reported simply as "OKRA." If a varietal name appears on the package it should be reported as "OKRA" in 3/4 bushel baskets stamped "White Velvet" or "Gold Coast."

(8) Type of container. Okra is shipped in bushel baskets, 1/2 bushel baskets, cartons, lugs or wire bound crates.

(9) Identifying marks. The purpose of this statement is to identify the lot. Include brands, grower's or shipper's marks, name and address, grade or any other significant markings. State of origin should be included if known.

(10) Quantity inspected. The number of containers should be shown on the certificate under "Products" statement. This may be shown as "Inspector's count _____," "Applicant states _____," or "Manifested as _____."

(11) Examples:

OKRA in 1/2 bushel crates stamped "Fancy." Manifested as 19 crates of South Carolina okra.

OKRA in fibreboard cartons printed "Pride of Hammond, Louisiana Green Okra, net wt. 18 lbs., M. Castle, Hammond, LA." Inspector's count 37 cartons.

SIZE

(12) There are no size requirements for okra and no tolerances specified. It may be reported in lengths of pods or diameter using general quantity terms. If size is requested report the facts as you find them.

(13) Examples:

From 1-1/2 to 9 inches in length. From 36 to 84% average 59% from 4-1/2 to 9 inches in length.

Pods generally 2 to 5, mostly 3 to 4 inches in length. Average 5% under 2 inches and 3% over 5 inches in length.

Pods generally 1-1/4 to 1-3/4 inches in diameter and 3 to 6 inches in length.

QUALITY

(14) Under this heading report the following:

Cleanness.
Shape.
Permanent defects.

(15) Cleanness: The following terms shall be used to describe cleanness: clean, fairly clean, slightly dirty and dirty. The grade requires that pods be free from damage by dirt. Pods will be considered as being damaged when dirt or other foreign matter materially affects the appearance or marketing quality.

(16) Shape: The minimum requirement for shape is not badly misshapen. Inspectors should not be too technical in scoring shape. Take the general shape for the variety into consideration before scoring badly misshapen pods against the grade. In describing the lot use general quality terms with "well shaped," "fairly well shaped," "slightly misshapen" and "badly misshapen."

(17) Permanent defects: Any defect or combination of defects which materially detracts from the appearance, edible or marketing quality of the individual pod or the lot as a whole should be scored against the grade.

Examples: (18)

Mostly clean, some fairly clean, mostly well shaped, some slightly misshapen, few fairly well shaped. Grade defects range from 6 to 17%, average 13% damage by healed cuts, scars and badly misshapen.

Clean, generally fairly well to well shaped, few slightly misshapen. Grade defects within tolerances.

CONDITION

(19)

Under this heading report the following:

Firmness (Freshness).
Tenderness.
Color.
Condition factors.
Decay.

(20)

Firmness and Freshness: Fresh is a basic requirement in the standards. Firmness is not mentioned but should be reported in association with freshness. The following terms should be used to describe the pods: "fresh and tender," "fairly fresh," "firm," "fairly firm," "flabby," "soft" or "wilted."

(21)

Tenderness: This, also, is a basic requirement of the standards. The following terms should be used in association with freshness: tender, fairly tender, fibrous and tough.

(22) Color: Varietal characteristics will dictate the color of pod. This color may vary from light green, green, deep green or dark green or even creamy white, in the case of White Velvet or Ladyfinger varieties. Any yellowing, not characteristic for variety, should be scored and reported as damage by yellow discoloration. This will normally occur in association with wilting and scored as condition factor.

(23) Condition factors: These include, but are not restricted to, such defects as the following:

Discoloration.
Freezing.
Insects (live).
Decay.

(24) Discoloration may occur as a light brown; brown; dark brown or black area affecting ribs, tips or the pod and should be described by color and affected area such as: "brown to light brown discoloration affecting from 1/10 to 1/4 of surface, ribs and tips occurring on pods adjacent sides of crates and those in contact with covers." Yellow discoloration, not characteristic for the variety is generally associated with over-heating or over-maturity.

(25) Decay: Normally the type of decay can be identified by the color of mold growth; such as Gray Mold Rot, Rhizopus Rot or Bacterial Soft Rot. If early stage of decay is present a description of it is better than misnaming the decay.

GRADE

Under this heading a clear statement, based on the facts reported under the previous headings, should be made showing that the lot meets or fails to meet the established grade, either on account of permanent or condition factors. The percentage of U. S. No. 1 quality may also be reported, if requested by the applicant. (26)

GENERAL EXAMPLES

Products Inspected: OKRA in crates labeled "Quetzal Brand, Okra, Produced and Packed by Promotora Agricola Basco Ltda. Teculutan Zacapa Guatemala, C. A.. "Fancy" or "Extra Fancy." Applicant states 145 crates.

Condition of load: Stacked at above location.

Temperature of Product: 47 to 58 degrees F.

Size: Each lot: Pods generally 2 to 5 inches, mostly 3 to 4 inches in length. Average 4% under 2 inches and 5% over 5 inches in length.

Quality: Clean, generally fairly well shaped. Grade defects average 8% scarring and badly misshapen.

Condition: Mostly fresh, tender and light to good green color. Range 6 to 24%, average 13% damage by brown to black discolored areas. From 10 to 28%, average 19% Gray Mold Rot in advanced stages.

Grade: Meets quality requirements but fails to grade U. S. No. 1 only account condition.

Remarks: Applicant states above lot unloaded from trailer Texas 792 ALO. Size reported at applicant's request.

Products Inspected: OKRA in tub type 1/2 bushel baskets. Lids stamped "Fancy Okra" or "Choice."

Manifested as 1001 baskets Fancy and 50 baskets Choice.

Condition of load: Through crosswise offset load 5 and 6 rows, 3 to 7 layers. Some baskets leaning toward rear doors of trailer, with some baskets in 2 lower layers crushed.

Condition of pack: Each lot: Generally well filled.

Temperature of Product: At rear doors: Top 36 degrees F., bottom 38 degrees F.

Size: xxxxx.

Quality: Each lot: Generally clean, mostly well, some fairly well shaped. Grade defects in Fancy lot averages 7%; in Choice lot, 3% consisting of badly misshapen and insect damage.

Condition: Each lot: Contents of most top layer baskets in 7 stacks nearest rear doors show watery translucent appearance extending up to 3 inches in depth in baskets and so located as to indicate injury occurred in trailer. Remainder: Each lot: Generally fresh, tender, firm and deep to dark green color. Fancy lot: Range 5 to 15%, average 9% damage by black discoloration affecting from 1/4 to 1/2 pod surface. Choice lot: Average 3% damage by black discoloration. Each lot: Less than 1/2 of 1% decay.

Grade: Each lot: Meets quality requirements but fails to grade U. S. No. 1 only account of condition.

Remarks: Inspection and certificate restricted to product and lading in upper 3 layers of 7 stacks nearest rear doors.

SECTION V

RHUBARB

GENERAL

Rhubarb belongs to the buckwheat family. The rhubarb plant is a herbaceous perennial. Botanically, rhubarb is a vegetable, however, in use it is considered a fruit. (1)

Only the leafstalk of rhubarb is suitable for human consumption. The leaf blade contains a high content of oxalic acid characterized by soluble salts and can be quite poisonous. (2)

Fresh rhubarb is available throughout the year with the heaviest supplies marketed January through August. Most of the nation's supplies originate in Washington, Michigan and California. (3)

The U. S. Standards for Grades of Rhubarb cover only "field grown" stock but can be used as guidelines for "hothouse" or "greenhouse grown" stock. If the rhubarb standards are used as guidelines no mention of the words damage or serious damage should be made in connection with defects. The terms materially or seriously affecting appearance should be used and under the "Grade" portion of the certificate the words "No established U. S. Grade" should be reported. (4)

(5)

TOLERANCES

Defects	U. S. Fancy	U. S. No. 1	U. S. No. 2
A. Defects	10%	10%	10%
B. Decay (including in A)	1%	1%	1%
C. Size (1) min. dia.	5%	5%	5%
(2) min. len.	5%	5%	5%

APPLICATION OF TOLERANCES

(6) The contents of individual packages in the lot are subject to not more than 1-1/2 times any tolerance of 10 percent or more and not more than double any tolerance of 5 percent or less. At least one defective stalk and one undersize stalk may be permitted in any package if the averages for the entire lot are within the tolerances specified in the grade.

PRODUCT

(7) Under this heading report the following information:

Commodity.
Type of container.
Identifying marks.
Quantity inspected.

(8) Commodity. The commodity should be reported in accordance with the facts, such as: "RHUBARB, field grown" or "RHUBARB, greenhouse grown."

Type of container: Rhubarb is generally marketed in wooden crates, lugs or fibreboard cartons depending upon the area from which it was shipped. (9)

Identifying marks: The purpose of this statement is to identify the lot. Always include brands, marks, names and addresses, other significant markings or if no markings are visible, an identifying lot number supplied by the shipper or receiver. (10)

Quantity inspected: The number of containers should be shown on the certificate as "Inspector's count," "Applicant states" or "Manifested as." (11)

Examples: (12)

RHUBARB, field grown, in wooden crates printed "First Pic Brand, Washington Crimson Rhubarb, net weight 20 lbs., Washington Rhubarb Growers Association. Summer, Washington," and stamped to denote lot number (56, V-79, A-32, Z-28 noted).
Applicant states 500 crates.

RHUBARB, hothouse grown, in crates labeled "Hothouse, Washington Grown, Extra Fancy, Washington Rhubarb Growers Association, Summer, Washington, net weight 15 lbs."
Inspector's count 10 crates.

SIZE

(13) "Diameter" means the greatest distance across the flat face of the stalk at the center of its length. For example: The diameter of 14 inch length should be measured at the 7 inch mark or 1/2 of its length. "Length" means the overall length after the stalk has been well trimmed.

(14) The minimum diameter of U. S. Fancy field grown rhubarb is one (1) inch in diameter and the minimum length is 10 inches.

(15) Unless otherwise specified, the diameter of U. S. No. 1 field grown rhubarb cannot be less than 3/4 inch and the length not less than 10 inches.

(16) Unless otherwise specified, the diameter of U. S. No. 2 field grown rhubarb cannot be less than 1/2 inch and the length not less than 8 inches.

(17) Examples:

(Field grown) Generally 1/2 to 1-1/4, mostly 3/4 to 1 inch in diameter and 8 to 16, mostly 10 to 14 inches in length. Average 4% under 1/2 inch in diameter and 3% under 8 inches in length. (Grade: U. S. No. 2 or U. S. No. 1 with size specified).

(Greenhouse grown) Generally 7/8 to 1-1/2, mostly 1 to 1-1/4 inches in diameter and from 14 to 16 inches in length.

Average 5% under 7/8 inch in diameter. None under 14 inches. (Grade: No established U. S. grade.) (Remarks: Size reported on above basis at applicant's request).

QUALITY

Report the following information under this heading: (18)

Cleanness.
Trimming.
Straightness.
Color.
Permanent defects.

Cleanness: All U. S. grades require stalks to be clean. Any amount of dirt or foreign material that detracts from the appearance of the stalk should be scored as damaged. (19)

Trimming: All U. S. grades require stalks to be well trimmed. This means that the top has been neatly knife-trimmed so that not more than 2 inches of the midribs and thin leaf tissue remains and that most of the basal husk has been removed. (20)

Straightness: The U. S. Fancy and No. 1 grades require stalks to be straight meaning that not more than slight concave curvature of the face and not more than slight twisting along the longitudinal axis of the stalk. The No. 2 grade requires stalks to be fairly straight which means not badly twisted or crooked. (21)

(22) Color: Color will vary depending upon variety and growing area. The terms needed to describe color are very well colored meaning that a pink or red color predominates on three-fourths or more of the stalk length - minimum requirement of U. S. Fancy; well colored meaning a pink or red color on one-half or more of the stalk length - minimum requirement of U. S. No. 1; and fairly well colored meaning a pink or red color on one-fourth or more of the stalk length - minimum requirement of U. S. No. 2.

(23) Permanent defects: Scarring, insects, mechanical and other means that can reasonably be identified as having occurred at shipping point should be classified as permanent defects and reported under the "Quality" heading of the certificate.

CONDITION

(24) Under this heading report the following:

Color of leaves (when present).
Discoloration (stalk or leaves).
Freezing.
Decay.

(25) Freshness and tenderness: In association with "fresh and tender" the term crisp should be used to describe stalks that meet the requirements of the U. S. Fancy and No. 1 grades. Even though not mentioned in the standards, crispness is a major selling point of rhubarb. "Fresh" means not limp or wilted. "Tender" means the stalk is crisp with no open texture or air spaces in the center portion of

the stalk (not pithy). Any pithiness is deducted from tenderness using general quantity terms. Likewise, shriveling and wilted stalks should be deducted from freshness.

Color of leaves: The color of the remaining portion of leaves after trimming is not mentioned in the standard but yellow, brown or black discoloration of these leaves detract from the appearance and should be scored. (26)

Discoloration: Any discoloration affecting the appearance of the stalk should be reported giving a full color description of the area and where it occurs. (27)

Freezing: Freezing injury and frozen should always be reported under Condition giving a complete description as to where it happened and how much of the stalk or contents of containers is affected. (28)

Decay: There are a few diseases which affect the leaves of the plant in the field and some that affect the leafstalk directly. Anthracnose, crown and foot rots, and stem spot which affect the leafstalks are sometimes damaging on the market. Gray Mold Rot is the principal market disease of rhubarb. (29)

GRADE

Under this heading on the certificate, a clear statement based on the facts reported in the preceding headings, should be made showing that the lot meets or fails to meet the established grade. (30)

GENERAL EXAMPLES

The following examples cover only Quality, Condition and Grade:

Quality: Generally clean and well trimmed, straight, mostly very well, some well colored. Grade defects range 3 to 21%, average 17% fairly well trimmed and damage by dirt.

Condition: Generally fresh, crisp and tender, leaves green color. Average 3% damage by pithiness. Average 4% damage by shriveling. No decay in most samples, 6% in some, average 2% Gray Mold Rot in early stages affecting basal portion.

Grade: Fails to grade U. S. No. 1 account of grade defects.

(Hothouse)

Quality: Clean, well trimmed, mostly straight, some fairly straight, very well colored. Range 8 to 33%, average 21% of stalks moderately twisted or crooked materially affecting appearance.

Condition: Fresh, crisp and tender. Leaves green. No decay.

Grade: No established U. S. grade.

SECTION VI
HORSERADISH ROOTS

GENERAL

(1) Horseradish roots are grown in Illinois and other Midwestern States and California. They are available in 5 and 50 pound containers.

TOLERANCES

(2)

Total defects (weight basis)	10%
INC. Hollow	5%
Decay (INC in total)	2%
Size (Minimum)	5%

APPLICATION OF TOLERANCES

(3) The contents of individual packages may contain not more than 1-1/2 times a tolerance of 10 percent or more, except that packages containing 15 specimens or less may contain not more than double the tolerance specified, Provided the average for the lot is within the tolerance specified for the grade.

(4) For a tolerance of less than 10 percent, individual packages may contain not more than double the tolerance specified; Provided, that at least one defective and one offsize specimen may be permitted in any package; Provided that the average for the lot is within the tolerance specified for the grade.

PRODUCT

(5) Report the following information under this heading:

Commodity.
Type of container.
Identifying marks.
Quantity inspected.

(6) Commodity: The commodity should be reported simply as "HORSERADISH ROOTS."

(7) Type of container: Generally the roots are marketed in 50 pound burlap sacks, film bags and wooden crates, few in 5 pound film bags.

(8) Identifying marks: This statement should include brands, names, addresses, grades, weights and other significant markings.

(9) Quantity inspected: The number of containers should be shown on the certificate as "Applicant states" or "Inspector's count" or "Manifested as."

(10) Examples:

"HORSERADISH ROOTS" in burlap sacks with no distinguishing marks. Manifested as 282 sacks of Illinois Horseradish Roots.

"HORSERADISH ROOTS" in film bags printed "5 lbs. net, HRR Brand, Horseradish Roots, H.R. Ramich, Anywhere, Ill."
Inspector's count 57 bags.

SIZE

A minimum length and diameter is specified in each of the U. S. grades with the length being measured from the top of the uppermost head to the tip of the main, useable root. The diameter of the root is the greatest thickness at a point halfway of its length. Length should be determined first so that the 1/16 inch reduction for greater length can be applied. (11)

The U. S. Fancy grade specifies a minimum length of 8 inches when the diameter is 1-1/2 inches or more. If the length is greater than 8 inches, the diameter may be 1/16 inch less for each additional half inch in length, but no root shall be less than 1-1/4 inches in diameter. (12)

The U. S. No. 1 grade specifies a minimum length of 6 inches when the diameter is 1-1/4 inches or more. If the length is greater than 6 inches, the diameter may be 1/16 of an inch less for each additional half inch of length, but no root shall be less than 1 inch in diameter. (13)

The U. S. No. 2 grade specifies a minimum length of 4 inches and a minimum diameter of not less than 1/2 inch. (14)

A tolerance of 5 percent is provided for roots smaller than the minimum size specified. This tolerance includes both length and diameter. (15)

Examples:

Generally 6 to 9, mostly 7 to 8-1/2 inches in length. Average 3% under 6 inches. Generally 1 to 1-3/4, mostly 1-1/4 to 1-3/4 inches in diameter. Range from (16)

4 to 31%, average 14% smaller than 1-1/16 inches in diameter and shorter than 6-1/2 inches in length. Average 2% under 1 inch in diameter.

From 8 to 9-1/2 inches in length. From 1-1/4 to 1-3/4 inches in diameter. No offsize.

QUALITY

17) Under this heading report the following:

Cleanness.
Trimming.
Shape.
Smoothness.
Head formation.
Defects.

18) Cleanness: The U. S. Fancy and No. 1 grades require roots to be free from damage by dirt which means not more than lightly caked dirt on the roots. Roots shall be considered seriously damaged when more than moderately caked or encrusted dirt is on the root.

19) Trimming: Well trimmed is a requirement of all the U. S. grades. This means that the top leaves are trimmed to not more than 1/2 inch in length from the head and that all secondary roots less than 5/8 inch in diameter at the point of attachment to the main root are trimmed to not more than 1 inch in length.

Shape: The U. S. Fancy grade requires roots to be well shaped, which means the root is not forked or branched. It may be slightly curved or crooked but not to exceed a total of 45 degrees from the course of a straight root. (20)

The U. S. No. 1 grade requires roots to be fairly well shaped, which means not more than moderately curved or crooked but shall not exceed a total of 90 degrees from the course of a straight root. (21)

There are no requirements for shape in the No. 2 grade. (22)

Smoothness: "Fairly smooth" is a requirement of the U. S. Fancy grade which means the surface of the root is not bark-like or rough or pitted to the extent appreciably detracting from its appearance. Portions of secondary roots on the side of the main root shall not be considered as rough. (23)

"Not excessively rough" is a requirement of the U. S. No. 1 grade and means that less than one-quarter of the surface in aggregate is affected by pitted or furrowed appearance less than one-eighth of an inch in depth. (24)

There is no requirement for smoothness in the U. S. No. 2 grade, but if excessively rough, pitted or furrowed it may be classified under the general definition of serious damage if a loss of more than 25 percent, by weight, of the root is encountered. (25)

Head formation: The head refers to the rounded knob at or near the top of the root to which the leaves are attached. The U. S. Fancy (26)

grade requires each root to have "good head formation." This means a head formation consisting of any number of heads, provided they are at the top of the root and not more than two are separated by a deep crotch.

(27) "Fairly good head formation" is the requirement for U. S. No. 1 roots. This means a head formation consisting of any number of heads, provided they are at the top of the root and not more than four are separated by deep crotches.

(28) There is no requirement for head formation in the U. S. No. 2 grade.

(29) Permanent defects: Cuts, bruises, cracks, sunburn, mechanical and other permanent defects are scored on the basis of materially affecting the appearance or 10 percent for damage and seriously affecting the appearance or 25 percent waste for serious damage.

(30) Hollow Heart: Hollow Heart is considered serious damage in all grades and scored against the 5 percent tolerance for Hollow Heart.

CONDITION

(31) Under this heading report the following:

Firmness.
Discoloration.
Freezing.
Mold.
Insects.
Decay.

Firmness: All grades require roots to be firm meaning not appreciably soft, flabby, wilted or withered. (32)

Discoloration: Discolorations are scored on the basis of materially or seriously detracting from the appearance. (33)

Freezing: Internal discoloration, pithiness, flabbiness or translucent areas caused by freezing are scored against the 10 percent tolerance. (34)

Mold: The presence of mold should be handled the same as discoloration and scored on appearance. (35)

Insects: Damage or serious damage by live insects should be considered as a condition factor, scored and reported, according to the facts. (36)

Decay: The type of decay affecting roots should be described as detailed as possible unless a substantial amount of mold is present and the inspector is positive of naming the decay. (37)

GRADE

Under this heading on the certificate, a clear statement based on the facts reported in the preceding headings, should be made showing that the lot meets or fails to meet the established grade. (38)

GENERAL EXAMPLES

Product: HORSERADISH ROOTS in burlap sacks with no distinguishing marks. Manifested as 175 - 50 lb. sacks of California horseradish roots.

Size: From 6 to 9-1/2 inches in length. From 1-1/4 to 2 inches in diameter. No offsize.

Quality: Mostly clean, some fairly clean, generally well trimmed, mostly fairly well, many well shaped, fairly smooth, generally good head formation. Grade defects range from 3 to 23%, average 18% cuts, poorly trimmed and growth cracks.

Condition: Generally firm. No decay in most samples, 5 to 8% in some, average 3% soft slimy yellowish decay with no mold growth.

Grade: Fails to grade U. S. No. 1 account of grade defects.

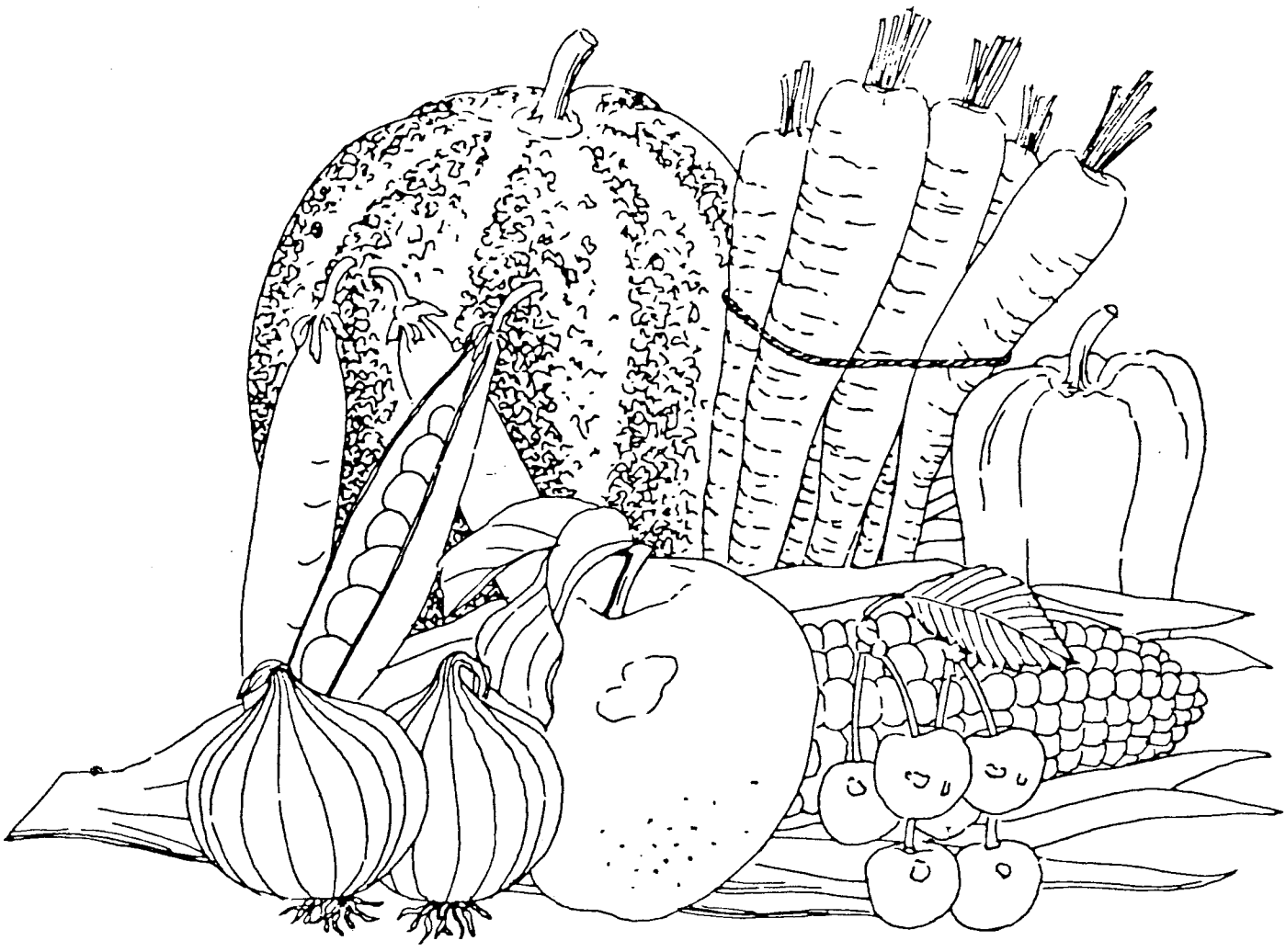
Quality: Generally fairly clean, few dirty, generally well trimmed, mostly well, some fairly well shaped, fairly smooth, good head formation. Grade defects average 8% damage by dirt, sunburn and cracks.

Condition: Generally firm. Average 3% new top growth from 1-1/4 to 1-1/2 inches in length. Average 4% damage by black discoloration affecting from 1/4 to 1/3 of root. Average 2% damage by brown to black mold covering 1/2 of root. Average 3% soft flabby roots. Average 1% decay.

Grade: Meets quality requirements but fails to grade U. S. No. 1 only account of condition.

Appendix I

United States Standards



Revised, March 2006, HU-151-1(b)
Appendix I, Artichokes, Chestnuts, Horseradish Roots, Okra, and
Rhubarb, Market Inspection Instructions, September 1976

Appendix I U.S. Grade Standards

United States Standards for Grades of Globe Artichokes[1]

Effective February 23, 2006

Grades

§51.3785 U.S. No. 1.

"U.S. No. 1" consists of artichokes which meet the following requirements:
(a) Basic requirements:
(1) Properly trimmed;
(2) Fairly well formed;
(3) Not overdeveloped; and,
(4) Fairly compact.
(b) Free from decay.
(c) Not damaged by any other cause.
(d) Fairly uniform in size.
(e) For tolerances see §51.3788.

§51.3786 U.S. No. 1 Long Stem.

"U.S. No. 1 Long Stem" consists of artichokes which meet the requirements of the U.S. No. 1 grade, except that the stems must be smoothly cut to a minimum length of at least 8 inches, unless otherwise specified to a longer length in connection with the grade.

§51.3787 U.S. No. 2.

"U.S. No. 2" consists of artichokes which meet the following requirements:
(a) Basic requirements:
(1) Not overdeveloped; and,
(2) Not badly spread.

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[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) Free from decay.
(c) Not seriously damaged by any other cause.
(d) Fairly uniform in size.
(e) For tolerances see §51.3788.

Tolerances

§51.3788 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) **For Defects.** 10 percent for artichokes in any lot which fail to meet the requirements for the grade, including not more than 2 percent for artichokes affected by decay.
(b) **For undersize stem length.** 5 percent for artichokes in any lot which fail to meet the length requirement.

Application of Tolerances

§51.3789 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:
(a) For a tolerance of 10 percent or more, individual packages shall have not more than 1-1/2 times the tolerance specified, and for a tolerance of less than 10 percent individual packages shall have not more than double the tolerance specified: **Provided,** That at least one defective and one undersize stem specimen may be allowed in any package: **And provided further,** That the averages for the entire lot are within the tolerances specified for the grade.

Definitions

§51.3790 Properly trimmed.

"Properly trimmed" means that the stem is smoothly cut and not excessively long.

§51.3791 Fairly well formed.

"Fairly well formed" means that the artichoke is not excessively long and pointed.

§51.3792 Fairly compact.

"Fairly compact" means that the artichoke is reasonably firm and not more than slightly spread.

§51.3793 Slightly spread.

"Slightly spread" means the outer scales may be slightly opened, but the inner scales at the tip of the artichoke must be closely folded into the bud.

§51.3794 Overdeveloped.

"Overdeveloped" means that the artichoke has a brownish color; that the scales are tough, leathery, and stringy; and, that the flower in the center of the bud has turned dark pink or purple and become fuzzy.

§51.3795 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the artichoke.

§51.3796 Fairly uniform in size.

"Fairly uniform in size" means that not more than 10 percent, by count, of the artichokes in any container may vary more than one-half inch in diameter.
(a) "Diameter" means the greatest dimension measured at right angles to a line from the stem to the opposite end of the artichoke.

§51.3797 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the artichoke.

Metric Conversion Table
§51.3798 Metric conversion table.

Inches	Millimeters (mm)
1/8 equals	3.2
1/4 equals	6.4
1/2 equals	12.7
3/4 equals	19.1
1 equals	25.4
1-1/2 equals	38.1
2 equals	50.8
3 equals	76.2
4 equals	101.6
5 equals	127.0
6 equals	152.4
7 equals	177.8
8 equals	203.2
9 equals	228.6

UNITED STATES STANDARDS FOR GRADES OF HORSERADISH ROOTS [1]

SOURCE: 32 FR 8862, June 22, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977, and at 46 FR 63203, Dec. 31, 1981.

Effective July 27, 1936

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

§ 51.3900 U.S. Fancy.

"U.S. Fancy" consists of horseradish roots which are firm, well trimmed, well shaped, fairly smooth, free from decay and hollow heart, and free from damage caused by dirt, sunburn, cuts, cracks, internal discoloration, mold, freezing, insects, mechanical or other means. Each root shall have good head formation. (See § 51.3904.)

(a) *Size.* The roots shall be not less than 8 inches in length when the diameter is 1½ inches or more: *Provided,* That if the length is greater than 8 inches, the diameter may be 1/16 inch less for each additional half inch in length, but no root shall be less than 1¼ inches in diameter. (See § 51.3904.)

§ 51.3901 U.S. No. 1.

"U.S. No. 1" consists of horseradish roots which are firm, well trimmed, fairly well shaped, not excessively rough, and which are free from decay and hollow heart, and free from damage caused by dirt, sunburn, cuts, cracks, internal discoloration, mold, freezing, insects, mechanical or other means. Each root shall have fairly good head formation. (See § 51.3904.)

(a) *Size.* The roots shall be not less than 6 inches in length when the diameter is 1¼ inches or more: *Provided,* That if the length is greater than 6 inches, the diameter may be 1/16 inch less for each additional half inch of length, but no root shall be less than 1 inch in diameter. (See § 51.3904.)

§ 51.3902 U.S. No. 2.

"U.S. No. 2" consists of horseradish roots which are firm, well trimmed, free from decay and hollow heart, and free from serious damage caused by dirt, sunburn, cuts, cracks, internal discoloration, mold, freezing, insects, mechanical or other means. (See § 51.3904.)

(a) *Size.* The roots shall be not less than 4 inches in length and not less than ½ inch in diameter. (See § 51.3904.)

UNCLASSIFIED

§ 51.3903 Unclassified.

"Unclassified" consists of horseradish roots 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.

[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.

TOLERANCES

§ 51.3904 Tolerances.

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

(a) *For defects.* Ten percent for roots in any lot which fail to meet the requirements of the specified grade, including therein not more than 5 percent for roots which are hollow and also including therein not more than 2 percent for roots which are affected by decay.

(b) *For size.* Five percent for roots in any lot which are smaller than the minimum size specified for the grade.

APPLICATION OF TOLERANCES

§ 51.3905 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

(a) For a tolerance of 10 percent or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified: *Provided*, That the average for the entire lot is within the tolerance specified for the grade.

(b) For a tolerance of less than 10 percent, individual packages in any lot may contain not more than double the tolerance specified: *Provided*, That at least one defective and one off-size specimen may be permitted in any package: *And provided further*, That the average for the entire lot is within the tolerance specified for the grade.

DEFINITIONS

§ 51.3906 Firm.

"Firm" means that the roots are not appreciably soft, flabby, wilted, or withered.

§ 51.3907 Well trimmed.

"Well trimmed" means that all secondary roots (plants) which are less than ⅝ inch in diameter at the point of attachment to the main root are trimmed to not more than 1 inch in length; and that tops (leaves) are trimmed to not more than ½ inch in length from the head.

§ 51.3908 Well shaped.

"Well shaped" means that the root is not forked or branched. It may be slightly curved or crooked but shall not diverge in direction more than a total of 45 degrees from the course of a straight root.

§ 51.3909 Fairly well shaped.

"Fairly well shaped" means that the root may be moderately curved or crooked but shall not diverge in direction more than a total of 90 degrees from the course of a straight root.

§ 51.3910 Fairly smooth.

"Fairly smooth" means that the surface of the root is not bark-like or pitted to an extent appreciably detracting from its appearance. Remnants of secondary roots on the side of the main root shall not be considered as roughness.

§ 51.3911 Excessively rough.

"Excessively rough" means that the surface of the root is pitted or furrowed to a depth of more than one-eighth of an inch over one-fourth or more of the surface in the aggregate, exclusive of the head. Remnants of secondary roots on the side of the main root shall not be considered as roughness.

§ 51.3912 Damage.

"Damage" means any defect or combination of defects which materially detracts from the appearance or the grinding quality of the root, or which cannot be removed without a loss of more than 10 percent, by weight, of the root including the peel covering the defective area.

(a) Dirt shall be considered as damage when it is more than lightly caked on the root.

§ 51.3913 Serious damage.

"Serious damage" means any defect or combination of defects which seriously detracts from the appearance or the grinding quality of the root or which cannot be removed without a loss of more than 25 percent, by weight, of the root including the peel covering the defective area.

(a) Dirt shall be considered as serious damage if it is more than moderately caked or encrusted on the root.

§ 51.3914 Head.

"Head" means that part of the root to which the leaves are attached. It is usually a rounded knob at or near the top of the root.

§ 51.3915 Good head formation.

"Good head formation" means a head formation consisting of any number of heads, provided they are at the top of the root and not more than two are separated by a deep crotch.

§ 51.3916 Fairly good head formation.

"Fairly good head formation" means a head formation consisting of any number of heads, provided they are at the top of the root and not more than four are separated by deep crotches.

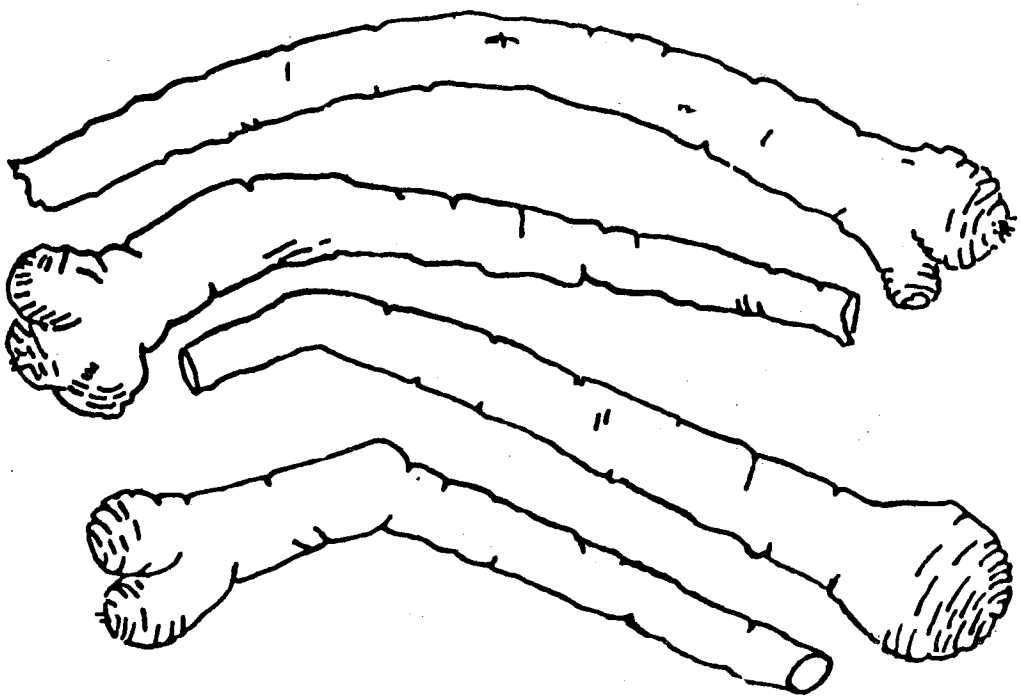
§ 51.3917 Length.

"Length" means the total over all length of the root from the top of the uppermost head to the tip of the main, usable root.

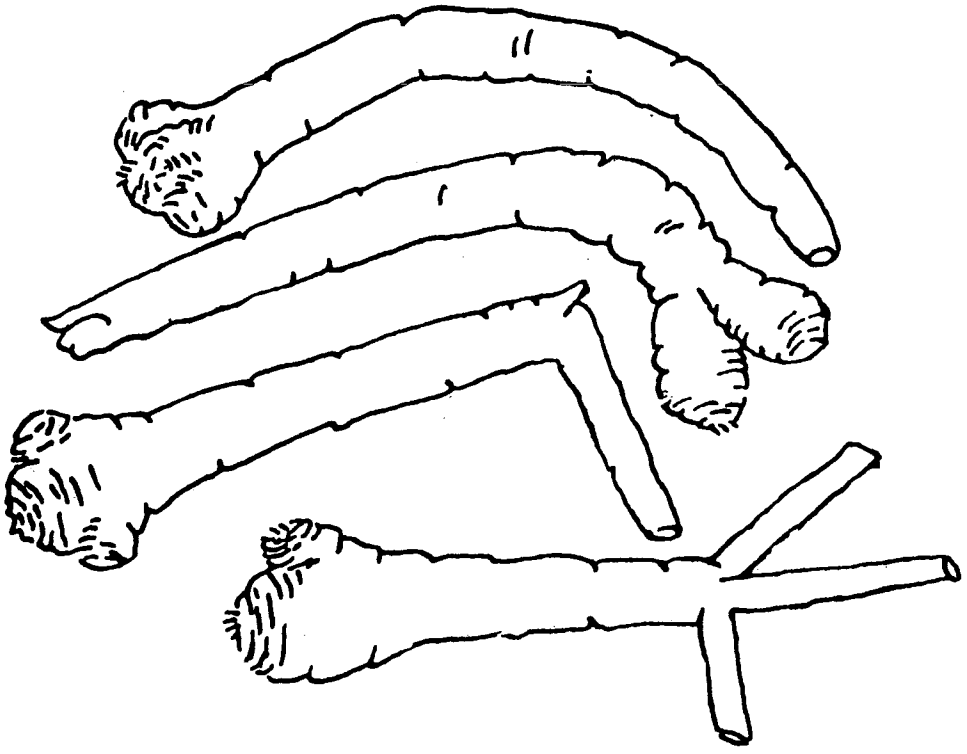
§ 51.3918 Diameter.

"Diameter" means the greatest thickness of the root at a point halfway of its length.

WELL SHAPED



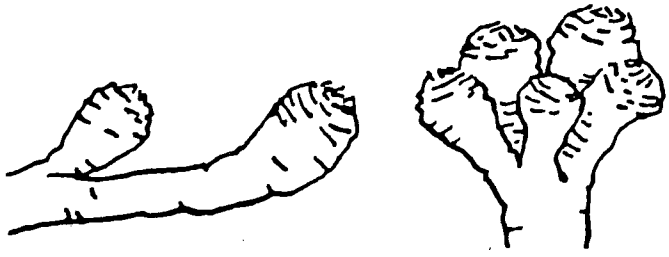
FAIRLY WELL SHAPED



GOOD HEAD FORMATION

FAIRLY GOOD HEAD FORMATION

NOT FAIRLY GOOD HEAD FORMATION



UNITED STATES STANDARDS FOR GRADES OF OKRA[1]

SOURCE: 32 FR 8864, June 22, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective December 18, 1928

Sec.

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.

GRADE

§ 51.3945 U.S. No. 1.

"U.S. No. 1" consists of pods of okra of similar varietal characteristics which are fresh, tender, not badly misshapen, free from decay, and from damage caused by dirt or other foreign matter, disease, insects, mechanical or other means.

(a) In order to allow for variations incident to proper grading and handling, the following tolerances, by weight, are provided as specified:

(1) Ten percent for pods in any lot which fail to meet the requirements of this grade, including therein not more than 5 percent for defects causing serious damage, and including in this latter amount not more than 1 percent for pods affected by decay.

[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 laws and regulations.

UNCLASSIFIED

§ 51.3946 Unclassified.

"Unclassified" consists of pods of okra which have not been classified in accordance with the foregoing grade. 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.

DEFINITIONS

§ 51.3947 Damage.

"Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the individual pod or of the lot as a whole.

§ 51.3948 Serious damage.

"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the individual pod or of the lot as a whole.

This is a reissue of U.S. Standards for Okra which were effective December 18, 1928. No substantive change is made in the text of the standards.

UNITED STATES STANDARDS FOR GRADES OF RHUBARB (Field Grown)[1]

SOURCE: 30 FR 17153, Dec. 31, 1965, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Effective February 1, 1966

GRADES

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

§ 51.3665 U.S. Fancy.

"U.S. Fancy" consists of stalks of rhubarb of similar varietal characteristics which are very well colored, fresh, tender, straight, clean, well trimmed and not pithy; which are free from decay, and free from damage caused by scars, freezing, disease, insects, or mechanical or other means. (See § 51.3669.)

(a) The diameter of each stalk is not less than 1 inch, and the length not less than 10 inches. (See § 51.3669.)

§ 51.3666 U.S. No. 1.

"U.S. No. 1" consists of stalks of rhubarb of similar varietal characteristics which are well colored, fresh, tender, straight, clean, well trimmed and not pithy; which are free from decay, and free from damage caused by scars, freezing, disease, insects or mechanical or other means. (See § 51.3669.)

(a) Unless otherwise specified, the diameter of each stalk is not less than three-fourths inch, and the length not less than 10 inches. (See § 51.3669.)

§ 51.3667 U.S. No. 2.

"U.S. No. 2" consists of stalks of rhubarb of similar varietal characteristics which are fairly well colored, fresh, fairly straight, clean, well trimmed and not pithy; which are free from decay, and free from serious damage caused by scars, freezing, disease, insects or mechanical or other means. (See § 51.3669.)

(a) Unless otherwise specified, the diameter of each stalk is not less than one-half inch, and the length not less than 8 inches. (See § 51.3669.)

UNCLASSIFIED

§ 51.3668 Unclassified.

"Unclassified" consists of rhubarb which has 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

§ 51.3669 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) *For defects.* 10 percent for stalks of rhubarb in any lot which fail to meet the requirements of the designated grade, including not more than one-tenth of this amount, or 1 percent, for stalks affected by decay.

(b) *For size.* 5 percent for stalks of rhubarb in any lot which fail to meet the specified minimum diameter, and 5 percent for stalks of rhubarb in any lot which fail to meet the specified minimum length.

[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 laws and regulations.

APPLICATION OF TOLERANCES

§ 51.3670 Application of tolerances.

The contents of individual packages in the lot are subject to the following limitations:

(a) For a tolerance of 10 percent, individual packages may contain not more than one and one-half times the tolerance: *Provided*, That the average for the entire lot is within the tolerance specified for the grade.

(b) For a tolerance of 5 percent or less, individual packages may contain not more than double the tolerance specified: *Provided*, That at least one stalk which is defective and one stalk which is undersize may be permitted in any package: *And provided further*, That the averages for the entire lot are within the tolerances specified for the grade.

DEFINITIONS

§ 51.3671 Similar varietal characteristics.

"Similar varietal characteristics" means that the rhubarb stalks are alike in general characteristics.

§ 51.3672 Very well colored.

"Very well colored" means that a pink or red color predominates on three-fourths or more of the length of the stalk.

§ 51.3673 Well colored.

"Well colored" means that a pink or red color predominates on one-half or more of the length of the stalk.

§ 51.3674 Fairly well colored.

"Fairly well colored" means that a pink or red color predominates on one-fourth or more of the length of the stalk.

§ 51.3675 Fresh.

"Fresh" means not limp or wilted.

§ 51.3676 Straight.

"Straight" means that the stalk has not more than a slight concave curvature of the face, and not more than slight twisting along the longitudinal axis of the stalk.

§ 51.3677 Well trimmed.

"Well trimmed" means that the top has been neatly knife-trimmed so that not more than 2 inches of the midribs and thin leaf tissue remains, and that most of the basal husk has been removed.

§ 51.3678 Pithy.

"Pithy" means that the stalk has an open texture with air spaces in the central portion.

§ 51.3679 Damage.

"Damage" means any defect or any combination of defects which materially detracts from the appearance or the edible or shipping quality of the stalk.

§ 51.3680 Diameter.

"Diameter" means the greatest distance across the flat face of the stalk at the center of its length.

§ 51.3681 Length.

"Length" means the overall length after the stalk has been well trimmed.

§ 51.3682 Fairly straight.

"Fairly straight" means that the stalk is not badly twisted or crooked.

§ 51.3683 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 stalk. Broken, badly bruised, and crushed stalks shall be considered as serious damage.

Dated: December 27, 1965.

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

[F.R. Doc. 65-13978; Filed, Dec. 30, 1965; 8:45 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

*U.S.GOVERNMENT PRINTING OFFICE:1988-241-848:80325/AMS