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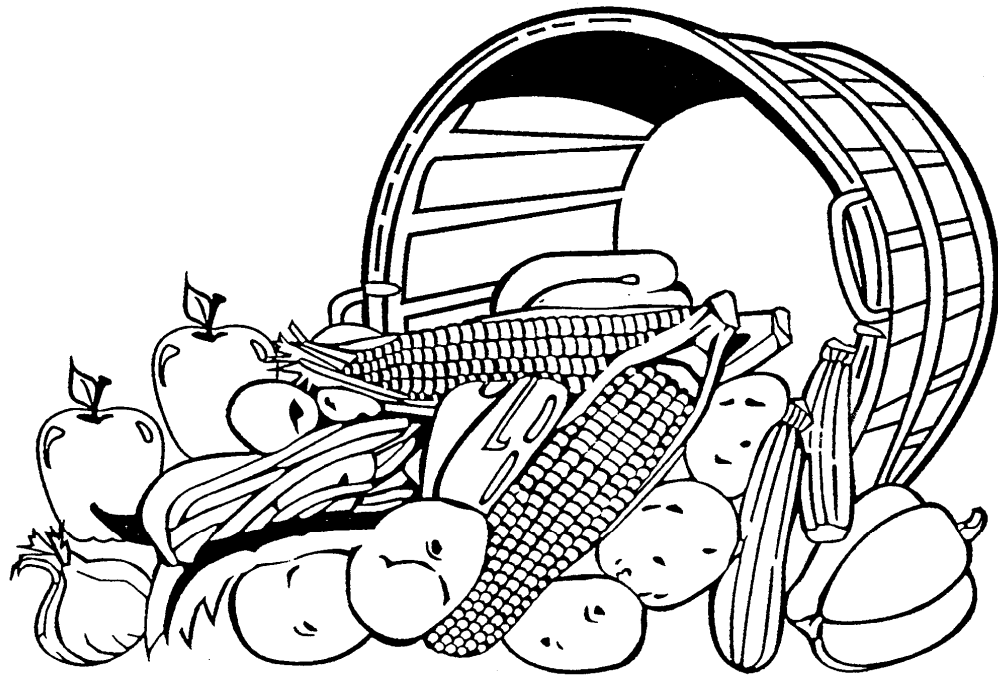
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Fresh Products
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Sweetpotatoes

Shipping Point and Market Inspection Instructions



Shipping Point and Market Inspection Instructions for Sweetpotatoes

These inspection instructions are specifically developed by the Fresh Products Branch to assist officially licensed inspectors in the interpretation and application of the U.S. Standards for Grades of Sweetpotatoes, Section 51.1600.

These instructions do not establish any substantial rule not legally authorized by the official grade standards. This publication supersedes any previously issued inspection instructions.

Refer to the General Inspection Instructions for additional information pertaining to date, inspection point, carrier, condition of carrier, lading, etc. that is not covered in this handbook. Reference to "General Inspection Instructions" in all Fresh Products Branch publications refers to any one or all of the following - General Shipping Point Inspection Instructions, General Market Inspection Instructions, or Fresh Fruit and Vegetable Certificate Writing Handbooks.

Any portion of these instructions beginning with the section number §51.--- and followed by **bold** print are sections or portions of sections copied directly from U.S. standards. The U.S. Standards for Grades of Sweetpotatoes are printed in the appendix of this handbook. All U.S. standards are available on the Internet under the USDA homepage.

November 2007

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This replaces Shipping Point Inspection Instructions for Sweetpotatoes dated, February 1964, and Market Inspection Instructions for Sweetpotatoes dated, December 1964.

Factors noted with (Q) are considered quality only. Factors noted with (C) are considered condition at market. Factors noted with (Q or C) may be quality or condition depending on the circumstances. Factors not designated do not pertain to either category.

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GENERAL

Sweetpotatoes are available to the consumer either fresh or from storage stocks practically year around. The bulk of the U.S. sweetpotato crops are produced in the tier of States extending from Texas to New Jersey. Of these, the main producing States are North Carolina, Mississippi, Louisiana, and Alabama. Other producing States are: California, Georgia, Virginia, and New Jersey. Some predominant varieties are Beauregard, Hernandez, Covington, and Jewel. However, newer varieties are often developed and replace the dominant varieties from season to season.

REPRESENTATIVE SAMPLING

The importance of obtaining representative samples cannot be over emphasized. Accurate certification is possible only if the samples examined are truly representative of the entire lot or accessible portion. All portions of a lot or load should receive the same attention in sampling regardless of the difficulty involved in reaching all layers or parts of a lot or load. Anytime the entire lot requested is not accessible for sampling, the inspection and certificate must be restricted to the accessible portion.

Number and Size of Samples

At Shipping Point

The number and size of individual samples to be examined per carload will vary according to conditions; but, in any event, they must be representative of all parts of the load or lot. Consult with the supervising inspector as to the number and size of samples. Following is the recommended minimum number of samples drawn from an average carlot shipment.

1. For packages containing more than 10 pounds: When time will permit, the entire contents of packages weighing up to 50 pounds should be used for the sample. If time is a factor it may be necessary to reduce the size of the sample in order to examine a sufficient number of samples. From 8 to 12 samples are to be examined in an average carlot, and in no case should the reduced sample be less than 20 pounds. If there are two or more brands or grades it will be necessary to increase the number of samples. If any reduced sample shows more than 1-1/2 times or double the tolerance (as the case may be), it will be necessary to increase the size of the sample to a full sample in at least the sample that exceeded the tolerances. Remember, no lot can be put out of grade on account of defects in one sample unless the entire contents of the container have been examined.

2. For packages containing 10 pounds or less: For an average carlot, no less than 30 samples are to be examined for 10 pound packages, and increased accordingly for smaller packages.

It should be remembered that these figures represent minimums only, and supervising inspectors may want to establish higher minimums.

At Destination or Market

As a general rule a minimum of 1% of the packages in a lot must be examined. For lots of less than 300 packages, a minimum of three samples must be examined. It is the inspector's responsibility to examine additional representative samples when the quality, condition, or size in samples is decidedly different to ensure an accurate description of the lot.

The tolerances in the U.S. Standards for Grades of Sweetpotatoes are determined on the basis of weight.

For packages containing more than 10 pounds - the entire contents or a minimum of 20 pounds shall be the sample.

For packages containing 10 pounds or less - the package shall be the sample size.

NOTE: A lot can not be put out of grade on account of defects in one sample; unless, the entire contents of the container have been examined.

NOTESHEET AND CERTIFICATE

Entries on the notesheet and certificate must be kept in a legible and accurate manner. It is mandatory that all information that appears on the certificate be supported by information on the notesheet. It is the responsibility of the inspector to ensure that all information is properly recorded. Notations shall be recorded so that anyone familiar with inspection procedures can interpret them and write a certificate. Also remember that notesheets and certificates are prima facie evidence and must be able to withstand legal scrutiny.

Detailed instructions pertaining to date, inspection point, place of inspection, type of carrier, lading, etc., which are not covered by these instructions may be found in the General Inspection Instructions. Your supervisor may give additional information and instructions.

TOLERANCES

§51.1605 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) Defects -- (1) U.S. Extra No. 1, U.S. No. 1 and U.S. No. 1 Petite grades. 10 percent of the sweetpotatoes in any lot may fail to meet the requirements of these grades, but not more than one-half of this amount, or 5 percent, shall be allowed for sweetpotatoes which are seriously damaged, including therein not more than 2 percent for sweetpotatoes affected by soft rot or wet breakdown (see §51.1606);

(2) U.S. Commercial. 25 percent of the sweetpotatoes in any lot may fail to meet the requirements of this grade, but not more than one-fifth of this amount, or 5 percent, shall be allowed for sweetpotatoes which are seriously damaged, including therein not more than 2 percent for sweetpotatoes affected by soft rot or wet breakdown (see §51.1606); and,

(3) U.S. No. 2. 10 percent of the sweetpotatoes in any lot may fail to meet the requirements of this grade, including therein not more than 2 percent for sweetpotatoes affected by soft rot or wet breakdown. (See §51.1606.)

(b) Off-size. 10 percent of the sweetpotatoes in any lot may fail to meet any specified size, but not more than one-half of this amount, or 5 percent, shall be allowed for sweetpotatoes which are below the minimum diameter and minimum length specified. (See §51.1606.)

The tolerances, by weight, for defects in the U.S. Standards for Sweetpotatoes are as follows:

Chart of Tolerances

U.S. Extra No. 1, U.S. No. 1 and U.S. No. 1 Petite: 10% Total defects, including 5% serious damage, including 2% soft rot or wet breakdown.

U.S. Commercial: 25% Total defects, including 5% serious damage, including 2% soft rot or wet breakdown.

U.S. No. 2: 10% Total defects (serious damage), including: 2% soft rot or wet breakdown.

The tolerance, by weight, for off-size in all grades is 10% including not more than 5% below minimum diameter and minimum length.

Note: Dry type rot (such as Black Rot, Charcoal Rot or Dry Rot) is serious damage regardless of the stage. Pox (Soil Rot) is not considered as decay (or scored against the soft rot tolerance).

Application of Tolerances

§51.1606 Application of tolerances.

The contents of individual packages in the lot are subject to the following limitations: Provided, That the averages for the entire lot are within the tolerances specified for the grade.

(a) Packages which contain more than 10 pounds shall have not more than one and one-half times a specified tolerance of 10 percent or more, or not more than double a specified tolerance of less than 10 percent, except that at least one defective and one off-size specimen may be permitted in any package; and,

(b) Packages which contain 10 pounds or less shall have not more than four times the tolerance specified or not more than two defective or off-size specimens in any package, whichever is the larger percentage.

REPORTING PERCENTAGES

Figuring Average Percentage

In order to determine the correct average percentage of defects or decay for irregular size samples, the percentage should be figured and recorded for each sample, these various percentages totaled and divided by the number of samples. This is based on the assumption that the samples are representative of the package. It is inaccurate to attempt to determine the average by dividing the total pounds scored by the total pounds examined if some samples consist of only 20 pounds and others of 50 or 60 pounds. In such a case the larger sample would affect the results more than the smaller ones.

Under "Size" and "Quality and Condition" headings on the certificate, the percentage of off-size or defective specimens in an off grade lot must be reported to the nearest whole number regardless of the "range" and "average." The word "approximately" must not be used under these headings. Ranges and averages must be reported exactly as they occur. This does not apply to reporting under the "Grade" heading on the certificate.

Fractional percentages are to be used only in the case of soft rot or wet breakdown, for example “less than 1/2 of 1% soft rot or “less than 1% soft rot.”

General Quantity Terms

<u>Occasional</u>	Means	1% to 5% (Use only with reference to containers.)
<u>Few</u>	“	10% or less
<u>Some</u>	“	11% to 25%
<u>Many</u>	“	26% to 45%
<u>Approximately half</u>	“	46% to 54%
<u>Most or Mostly</u>	“	55% to 89%
<u>Generally</u>	“	90% or more
<u>Practically All</u>	“	96% or more

These are complementary terms and are to be used in a way that will account for the entire lot. For instance “Mostly fairly clean” would be incorrect because the remainder of the lot is not accounted for. A correct statement is: “Mostly fairly clean, some clean.”

Product

The common name “Sweetpotatoes,” shall be used to describe this commodity in the product heading. Type may be reported in conjunction with “Sweetpotatoes” or may be reported in the “Product/Variety” section on the shipping point inspection certificates or in the “Lot ID” section on market notesheet and certificate.

Type or Variety: If the inspector is not certain as to the variety, the stock should be described, giving the appropriate skin color. Terms such as “Yellow,” “White,” “Red,” or “Copper,” or appropriate combinations of these terms may be used.

The term “Yam” is incorrect; but, it is commonly used to designate a type of sweetpotato having a moist flesh and high sugar content. This term is not botanically correct as the real Yam belongs to a different family of plants from the sweetpotato. However, its use has become so general among commercial interests that sweetpotatoes of this type are frequently called “Yams.” It is permissible to report such sweetpotatoes as “Yams” under the “Brands and Markings” section if the packages are marked as such or in the “Lot ID” if it is stated by the applicant.

Number/Type of Containers

The number of containers shall always be reported. At shipping point locations for “days-run” certification, the applicant generally provides a manifest for count and it is acceptable to use this for the number of containers. For stationary lot certification, the inspector shall always verify the container count provided by the applicant for each lot. If the number of containers available for inspection does not match the application it is the inspector’s responsibility to confirm that the amount presented for inspection constitutes the lot. If an accurate count cannot be determined the inspector may report the count at someone else’s authority. However, the reason for doing so must be reported on the notesheet (e.g., numerous pallets with mixed product).

Sweetpotatoes are usually packed and shipped in cartons, as well as small bulk bins. Sweetpotatoes are usually packed and shipped in 40, 20, and 10 pound cartons. If consumer bags are packed in cartons, they usually consist of 3 to 5-lb. bags.

Brands/Markings

The brand, variety, size, count, grade, weight, point of origin and other important information appearing on the container should be reported on the notesheet in the “Brands/Markings” section. Only the brand name and other key markings necessary to properly identify the lot for certification should appear in this section on the certificate. This policy is necessary because some firms may use one mark on the same product packed in several States. The inspector can certify only to the marks and has no means of knowing what State or country the sweetpotatoes are grown. If packages are not marked or the sweetpotatoes are in bulk, refer to the *General Market Inspection Instructions*.

Origin

The inspectors should not make a positive statement on their own authority, but when container markings list the State or country of origin, it should be quoted in the appropriate space on the notesheet and the certificate. If origin is not marked, it is the inspector’s responsibility to make an effort to obtain this information from the applicant.

CONDITION OF PACK

In describing pack the following terms should be used with the meanings indicated:

Well Filled - means that the product is tight against the lid or cover with a slight bulge.

Fairly Well Filled - means that the package is sufficiently filled to prevent any appreciable movement of the sweetpotatoes, and the sweetpotatoes are in contact with the lid or cover.

Slightly Slack - means that the sweetpotatoes are not in contact with the lid or cover, but not more than 1/2 inch below the lid or cover.

Slack - means that the sweetpotatoes are more than 1/2 inch below the lid or cover. When the term "slack" is used, the amount is shown in inches or fractions of an inch.

SIZE

The size requirements for the grades are as follows:

§51.1600 U.S. Extra No. 1. (a) Size - (1) Length shall be not less than 3 inches or more than 9 inches. (2) Maximum weight shall be not more than 18 ounces. (3) Maximum diameter shall be not more than 3-1/4 inches. (4) Minimum diameter, unless otherwise specified, shall be not less than 1-3/4 inches. (See §51.1605.)

§51.1601 U.S. No. 1 and §51.1602 U.S. Commercial. (a) Size - (1) Maximum diameter shall be not more than 3-1/2 inches. (2) Maximum weight shall not be more than 20 ounces. (3) Length, unless otherwise specified, shall be not less than 3 inches or more than 9 inches. (4) Minimum diameter, unless otherwise specified, shall be not less than 1-3/4 inches. (See §51.1605.)

§51.1602 U.S. No. 1 Petite. (a) Size. (1) Diameter shall be not less than 1-1/2 inches or more than 2-1/4 inches. (2) Length shall be not less than 3 inches or more than 7 inches. (See §51.1605.)

§51.1603 U.S. No. 2. (a) Size. Unless otherwise specified the minimum diameter shall be not less than 1-1/2 inches and the maximum weight not more than 36 ounces. (See §51.1605.)

§51.1613 Length. "Length" means the dimension of the sweetpotato, measured in a straight line between points at or near each end of the sweetpotato where it is at least three-eighths inch in diameter.

§51.1614 Diameter. "Diameter" means the greatest dimension of the sweetpotato, measured at right angles to the longitudinal axis.

A tolerance of 10 percent is permitted for sweetpotatoes which do not meet the size requirements but no more than one-half of this tolerance, or 5 percent, is permitted for sweetpotatoes which are below the minimum diameter and minimum length specified.

Accordingly, any lot which has no undersize sweetpotatoes may contain 10 percent above the maximum size and still meet grade requirements, provided that it meets the other quality requirements; or a lot which contains 2 percent undersize may have 8 percent oversize.

Show the exact percentage of off-size when the lot does not meet a grade because of size or defects.

Size Chart

GRADE	Length ¹ (in inches)		Diameter ² (in inches)		Weight (in ounces)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
U.S. Extra No. 1	3	9	1 3/4 *	3 1/4	**	18
U.S. No. 1 and U.S. Commercial	3 *	9 *	1 3/4 *	3 1/2	**	20
U.S. No. 1 Petite	3	7	1 1/2	2 1/4	**	**
U.S. No. 2	**	**	1 1/2 *	**	**	36 *

* Unless otherwise specified

** No requirement

¹ Length - the dimension of the sweetpotato, measured in a straight line between points at or near each end of the sweetpotato where it is at least three-eighths inch in diameter.

² Diameter - the greatest dimension of the sweetpotato, measured at right angles to the longitudinal axis.

Undersize and Oversize Specimens Which Are Also Defective

In connection with undersize and oversize it should be remembered that undersized or oversized potatoes which are also defective shall be scored twice, first as off-size and second as grade defects, because the grades have separate tolerances for off-size and grade defects. Generally the percentage of undersize specimens that are defective will be negligible and will make no difference in the grade certification. However, the oversize specimens that are defective may make a material difference in the grade certification. Under ordinary conditions, when the percentages of off-size specimens which are also defective amounts to 1 or more, the usual size statement should be made, giving the total off-size, including those specimens that are also defective. No mention of defects should be made under the size heading. However, this information shall be reported under the Quality heading.

Unless Otherwise Specified in Connection with Size

The following factors of size which may be otherwise specified for each grade are:

- U.S. Extra No. 1 - Minimum diameter.
- U.S. No. 1 - Minimum and maximum length, minimum diameter.
- U.S. Commercial - Same as U.S. No. 1.
- U.S. No. 2 - Minimum diameter, maximum weight.

DEFECTS (QUALITY AND CONDITION)

Statements pertaining to freshness, maturity, shape, color, the amount and type of defects, and the amount of decay are shown under the appropriate headings.

Factors noted with **(Q)** are considered as **QUALITY** only (**Quality**, sometimes referred to as “**permanent**” defects, means defects which do not change during storage or shipment (shape, scars, etc.).

Factors noted with **(C)** shall be reported as **CONDITION** on market certificates. (**Condition defects** are defects which are subject to change during shipment or storage, including but not limited to bruising, discoloration, shriveling and decay).

Those factors noted with **(Q or C)** may be considered as **QUALITY or CONDITION**, depending on the circumstances.

Brightness

Usually brightness of sweetpotatoes is not reported on certificates. However, if requested by the applicant, this information may be shown reported at applicant’s request. Suitable terms to use in this connection with brightness are: dull, fairly bright, or bright.

The term “bright” applies only when the skin has a live, glossy, or lustrous appearance and when the potatoes are practically free from dirt. Sweetpotatoes that have been washed are not necessarily bright.

Bruises and Discoloration (Q or C)

Bruises are one of the most common defects. Bruises are generally discolored but will tend to be of a brown, gray or black shade. The skin and flesh of the sweetpotato may break, tear, or only exhibit discoloration. The size and shape of a bruise may vary considerably.

At shipping point all bruises are considered quality defects. En route or at destination, inspectors must make the distinction as to whether the bruise is “old” or “fresh.” Old bruises are considered quality defects. Fresh bruises are considered condition defects.

Bruises and discolored areas which materially affect the general appearance or cause more than 5% waste should be scored against U.S. Extra No. 1, U.S. No. 1, U.S. No. 1 Petite, and U.S. Commercial grades. Those that seriously affect the appearance or cause more than 10% waste should be scored against U.S. No. 2 grade and the restricted 5% tolerance for serious damage in U.S. Extra No. 1, U.S. No. 1, U.S. No. 1 Petite, and U.S. Commercial grades.

Score as damage when more than 25% of the surface is so severely skinned that the flesh of the sweetpotato is affected. This is scored as bruising, common to the Nemagold variety, and is not to be confused with normal skinning or feathering on freshly dug sweetpotatoes. These severely skinned areas in many cases will dry out and heal over without discoloration. At other times they may become slightly sunken and discolored.

Discoloration on early shipments is a condition factor.

If the penetration is 1/8 inch or less, score as damage when the aggregate discolored area exceeds 1-1/4 inches. If the penetration is more than 1/8 inch, score as damage when the aggregate discolored area exceeds 1 inch. These areas are based on a 7 to 9 ounce sweetpotato and are to be used only as a guide. Correspondingly larger and smaller areas are allowed on larger or smaller sweetpotatoes.

Chilling Injury, Freezing Injury, and Internal Breakdown (C)

Chilling Injury

Chilling injury is caused by exposure to temperatures below 50° to 55° F (depending on the variety) after a few days or shorter periods at or below these temperatures. These low temperatures cause tissue breakdown, resulting from physiological changes in the sweetpotato. Internal discoloration from brown to slightly black is the first symptom of chilling injury. Discolored areas may be scattered but are closely aligned with the vascular elements in the central part of the sweetpotato. Thus, flavor will be adversely affected upon cooking. Properly cured sweetpotatoes are more resistant to chilling injury than noncured.

Freezing Injury

Freezing injury usually does not occur in storage because temperatures must be maintained well above freezing to prevent chilling injury. Sweetpotatoes that have been slightly frozen show a yellowish-brown discoloration in the vascular ring and the internal vascular elements and the roots also look yellowish-green and water-soaked. Once

freeze exposure has created ice crystals, the thawing process (water evaporating causing the tissues to collapse) will cause the sweetpotatoes to become soft and flabby.

Internal Breakdown

This condition is usually found late in the storage season and is most prevalent in storage areas that have been kept warm and too dry and/or in storage areas where slight chilling injury has occurred. In advanced cases, the affected stock can be detected by their light weight and spongy feeling. Internal tissues are pithy or dry and spongy, with cavities forming in the central parts of the roots as the tissues separate. Occasionally, the spongy tissues are light yellow or white and have a cottony texture.

Internal Breakdown, Chilling and Freezing Injury are scored as **serious damage** regardless of the size of the area affected because all grades require “free from internal breakdown, freezing injury.” Very slight pithiness confined to a small portion of one end of the sweetpotato should not be interpreted as internal breakdown. For examples on reporting freezing patterns, refer to the General Market Handbook.

Cleanness (Q)

Sweetpotatoes are usually grown in light type soils and, therefore, dirt normally is not a serious problem except for early market stock which is harvested during wet seasons.

Cured stock is subjected to several handling operations that tend to eliminate most of the adhering dirt. Where grown on sandy soil it is seldom that a lot of sweetpotatoes will be sufficiently dirty to affect U.S. No. 1 grade. Inspectors are warned to exercise caution regarding the use of any term that is not appropriate or descriptive.

The following terms may be used to describe cleanness:

Clean

Sweetpotatoes that are practically free from dirt or foreign matter shall be described as clean. While few carlots are considered “clean” unless properly brushed or washed, it does not necessarily mean that they must be washed or brushed to report as “clean.”

Fairly Clean

Sweetpotatoes that are not caked with dirt or which have dirt or other foreign material that does not materially detract from the general appearance of the lot shall be described as “fairly clean.” This is the minimum requirement for all grades; except, for the U.S. No. 2 grade.

Slightly Dirty

Sweetpotatoes that show considerable dirt or foreign matter but are not so badly caked that the general appearance of the sweetpotatoes in the containers are seriously affected shall be described as “slightly dirty.” “Slightly dirty” is acceptable in the U.S. No. 2 grade.

Dirty

Sweetpotatoes that are badly caked with dirt or the general appearance of the sweetpotatoes in the containers are seriously affected by dirt or foreign matter shall be described as “dirty.” These “dirty” sweetpotatoes are not permissible in any U.S. grade.

Similar Varietal Characteristics (U.S. Extra No. 1) or One Type (Other Grades) (Q)

The U.S. Extra No. 1 grade specifies “similar varietal characteristics.” Score sweetpotatoes that are not of similar varietal characteristics as “Dissimilar varieties.”

§51.1607 Similar varietal characteristics. “Similar varietal characteristics” means that the sweetpotatoes have the same character of flesh and practically the same skin color. For example, dry type shall not be mixed with semi-moist or moist type.

The U.S. No. 1, U.S. No. 1 Petite, U.S. No. 2 and U.S. Commercial grades specify that the sweetpotatoes are of one type. Score sweetpotatoes that are not of “One type” as “Dissimilar types.”

§51.1615 One type. “One type” means that the sweetpotatoes have the same character of flesh, and do not show an extreme range in skin color. For example, dry type shall not be mixed with semi-moist or moist type, and deep red or purple skin color shall not be mixed with yellow or reddish copper skin color.

In describing the general appearance of sweetpotatoes, uniformity of skin color is important. They may be clean and bright but the skin coloring is so irregular as to give the lot a poor appearance. This irregular color of sweetpotatoes in the container materially affects the market value especially in copper colored skin strains of the Porto Rican variety. In some cases lots showing an extreme range in skin color are color waxed.

It is probable that prior to color-waxing these lots could not be certified as fairly uniform in color. However, after color-waxing these same potatoes could very well be certified as fairly uniform or even uniform in color. In such cases, the only basis for judging uniformity of color is the appearance after color-waxing.

In describing the general appearance as relating to color of skin, the following terms may be used:

Uniform Color

Sweetpotatoes must have practically the same color skins or shades of the same color to meet the uniform color requirement for the **U.S. Extra No. 1** grade.

Fairly Uniform Color

Sweetpotatoes must not show an extreme range in skin color in order to meet the requirement of one type. For example, deep red or purple skin color shall not be mixed with yellow or reddish copper skin color. **Sweetpotatoes certified as U.S. No. 1, U.S. No. 1 Petite, U.S. Commercial, and U.S. No. 2 must be at least fairly uniform in color.**

Irregular Color

Sweetpotatoes in which the skin shows an extreme range in color and the general appearance of the lot is affected are of irregular color. **Such lots are considered as poor color and do not meet the requirements of any U.S. grade.**

Curing

Curing helps to heal cuts and other injuries received in harvesting and handling; thus, it may slow the onset of decay. If the curing temperature and relative humidity are lower than recommended, healing is slower and less effective in slowing the onset of decay in storage or during marketing.

Prompt curing after harvest is really important for sweetpotatoes that are harvested during or after a period of cold weather. For ideal curing, good ventilation is needed in order to prevent accumulation of carbon dioxide, depletion of oxygen, or condensation of moisture.

Sweetpotatoes can be certified as “cured” when they meet the following definition: A cured sweetpotato is one that is not freshly dug but has been stored for such a length of time that the skin is not tender, but has a more or less leathery, dry feel, and will not readily slip. It will not be necessary to state curing. However, curing may be certified if specifically requested.

Cuts and Broken Ends (Q or C)

In judging these defects, take into consideration the degree and extent of injury. If the injury is slight, there is no need to mention it. The ends, especially those of the long type, are often broken off in handling, leaving scars that may detract considerably from the appearance of the lot whether or not decay develops.

Fresh cuts or breaks incident to good commercial handling should not be scored against any grade unless the appearance is sufficiently injured to affect the grade.

A sweetpotato weighing approximately 12 ounces and about 2-1/2 to 3 inches in diameter with a cut about **1 to 1-1/4 inches in diameter** at the end of the sweetpotato is the **maximum permitted and not considered as damage**, provided the cut or break is practically at right angles to the longitudinal axis.

A sweetpotato of the same weight and diameter as above having a cut or break about **1-1/4 to 1-3/4 inches in diameter** at the end of the sweetpotato is the **maximum permitted and not considered as serious damage** provided the cut or break is practically at right angles to the longitudinal axis.

These areas shall be used as a guide in determining whether or not other types of cuts, or cuts on larger or smaller sweetpotatoes, detract sufficiently from the appearance to affect grade.

Cuts on the side of the potato are more objectionable and detract from the appearance to a greater extent than cuts at the end of the sweetpotato; therefore, should be restricted to a smaller area.

Unhealed cuts or breaks that extend into the flesh of the body of the sweetpotato should be scored when sweetpotatoes are inspected after they have been cured. Small breaks due to the removal of small “tails” or secondary rootlets (commonly done to “dress up” the sweetpotato) should not be scored against the grade.

Enlarged Lenticels (Q)

It is generally believed that this injury is caused by excessive rains, moisture or similar climatic conditions just prior to harvesting. There is very little, if any, change after harvesting, in storage or transit. In determining whether the injury is sufficiently severe to score, the general appearance of the individual root as well as the lot as a whole should be considered. As a guide, individual roots that show more than 50% of the surface in the aggregate affected shall be scored as damaged. Lesser amounts on individual roots should not be scored unless there are sufficient roots affected to materially affect the general appearance of the lot. In that event, the lot should be reported below grade. For example: “Many sweetpotatoes show enlarged lenticels which materially affect the general appearance.”

Enlarged lenticels will seldom, if ever, be sufficient to affect U.S. No. 2 grade.

Firmness (C)

All U.S. grades require sweetpotatoes to be firm.

§51.1608 Firm. “Firm” means not more than slightly flabby or shriveled.

Sweetpotatoes that are more than slightly flabby or shriveled are to be scored against all grades. Do not score slightly flabby or slightly shriveled sweetpotatoes until they are readily flabby or shriveled.

Growth Cracks (Q)

Growth cracks may develop from very rapid growth, usually when a dry period is followed by a rainy one or uneven water availability. Growth cracks usually follow the long axis of the sweetpotato and result from internal pressure exceeding the tension of the surface tissues while it rapidly enlarges.

Score as **damage** when growth cracks materially detract from the appearance of the individual sweetpotato or the general appearance of the lot.

Score as **serious damage** when growth cracks are unhealed or seriously detract from the appearance of the individual sweetpotato or the general appearance of the lot.

Any sweetpotato having an unhealed growth crack is seriously damaged.

Insect and Similar Injuries (Q or C)

Insect damage is scored against areas which materially detract from the appearance, or the edible or shipping quality of the individual sweetpotato or which cannot be removed without a loss of more than 5 percent of the total weight of the sweetpotato including peel covering the defective area. For insect damage that matches the descriptions below, the following guides shall be used. Otherwise, if injury is not readily identifiable as cucumber beetle injury, grub damage, or wireworm injury use the general definitions of damage. Use the general definition for serious damage as your guide for scoring areas, which are seriously damaged.

Note: Live insects or larva are reported as condition; however, if the insects are dead, then report as quality. If both live and dead insects are present, then report as condition.

Cucumber Beetle Injury

When cucumber beetles attack sweetpotatoes in the early stages of growth, the punctures enlarge as the sweetpotato grows and produces healed crater-like lesions. Beetle injury of this type is to be scored on appearance only, since depth usually will not be a factor. Very often these lesions will blend in with the unaffected portion of the sweetpotato and will not materially detract from the appearance.

Injury that occurs later in the growing season is characterized by numerous punctures of fairly uniform depth and diameter. In scoring beetle injury of this type as damage or serious damage two factors are to be considered, (1) aggregate depth of holes and (2) appearance.

Based on a 6 to 8 ounce sweetpotato the maximum aggregate depth allowed for well scattered punctures is 1-1/4 inches for U.S. No. 1 and 2 inches for U.S. No. 2.

For example, 10 holes of 1/8 inch depth each are allowed for U.S. No. 1, provided that they are well scattered and not over 1/16 inch in diameter. If the average depth is less than 1/8 inch, then a greater number of holes are permitted. Conversely, if the diameter of some of the holes is larger than 1/16 inch, then a lesser number of holes are permitted. Remember, the preceding example applies only to well scattered punctures. If these 10 holes were concentrated, then the appearance would be materially affected. The sweetpotato would be scored as damaged even though the aggregate depth limitation was not exceeded.

It is not necessary to cut each and every hole to determine aggregate depth, rather cut only in 2 places that in your opinion represent the shallowest and deepest holes to establish the average depth.

These areas are to be used only as a guide; correspondingly larger or smaller sweetpotatoes may be affected to a greater or lesser degree.

Grub Damage

Several species of white grubs are pests of sweetpotatoes. Larvae gouge out broad, shallow areas on the root, reducing the marketability of crops.

Score as damage if grub injury either materially detracts from the appearance or causes a loss of more than 5% of the total weight. Score as serious damage if grub injury either seriously detracts from the appearance or causes a loss of more than 10% of the total weight.

Wireworm, Weevil, Grass Root or Other Similar Defects

§51.1612 Damage...(e) Wireworm, grass root or similar injury when any hole in a sweetpotato ranging in size from 6 to 8 ounces, is more than three-fourths inch long, or when the aggregate length of all holes is more than 1-1/4 inches, or correspondingly shorter or longer holes in smaller or larger sweetpotatoes.

Score as serious damage when any sweetpotato has insects, larvae, or worms present inside the sweetpotato.

Internal Cork (Q)

Internal cork is a virus disease of sweetpotatoes characterized by dark-brown to black, hard, corky spots of irregular size and shape in the flesh of infected roots. Occasionally a surface depression indicates a corky area beneath the skin, but usually the disease cannot be detected without cutting. The hard corky spots are sharply outlined and the surrounding tissue shows no signs of deterioration.

Cork spots located near the surface of the sweetpotato shall be scored as waste basis only. Score as damage when waste exceeds 5 percent; as serious damage when waste exceeds 10 percent.

Maturity and Skinning (Q)

Maturity of sweetpotatoes is not a requirement of any of the grades. Maturity of sweetpotatoes is a relative term and unless growth is stopped by digging, frost, etc., they may continue growing for several years. Because of this, the firmness and size of the sweetpotatoes is usually of more importance than the actual state of maturity and no lot of sweetpotatoes shall be certified as immature unless it is early in the season and the stock is shriveled to the extent that it cannot be certified as firm.

While no mention should be made of maturity, the sweetpotatoes may be skinned sufficiently to justify reporting this factor. In that case, the following terms may be used to describe the degree of skinning.

Degree of Skinning:

- Slightly skinned means less than 1/4 of the skin is missing or feathered.
- Moderately skinned means 1/4 to 1/2 of the skin is missing or feathered.
- Badly skinned means more than 1/2 of the skin is missing or feathered.

As a general policy when skinning is no worse than slightly skinned, it is not necessary to make any mention of the skinning on the certificate; unless, requested by the applicant.

Pox (Soil Rot) (Q)

Soil rot or pox is found in all sweetpotato growing regions of the United States. Losses vary considerably from season to season; in many areas soil rot is considered as one of the most important field diseases. It seriously affects the growth and yield of infected plants and the surface of the sweetpotato.

Pox is characterized by dry, brown pits or pox marks, of irregular size and shape, and may vary in size from less than 1/8 inch to 1/2 inch in diameter. While the terms "Pox" and "Soil Rot" are synonymous and are used interchangeably by the trade, Pox (Soil Rot) in itself is not decay.

§51.1612 Damage. (d) Pox (Soil Rot) when materially detracting from the appearance of the individual sweetpotato;

§51.1617 Serious damage. (c) Pox (Soil Rot) when seriously detracting from the appearance of the individual sweetpotato;

Score this defect as damage and serious damage from the appearance standpoint as defined above.

Rodent and Bird Damage (Q)

Frequently rodents, such as field mice or gophers gnaw into sweetpotatoes and cause cavities that may be confused with grub injury. Generally the cavities made by rodents are larger and deeper and always bear the marks of the teeth of the animal in the form of corrugations or ridges. Injuries caused by chickens or other birds are easily identified by the pit-like markings lining the cavity.

If these injuries materially detract from the appearance or cause a loss of more than 5%, score as damage; and if present in amounts greater than 10%, score as serious damage.

Scurf (Q)

Scurf is one of the more common diseases of sweetpotatoes. It occurs on all varieties and appears to some extent on stock from all shipping areas. Scurf may occur as small spots and blotches, or in some cases may affect the entire surface of the sweetpotato. Discoloration appears as small, grayish-brown to black spots and blotches are usually only skin deep. They may be found anywhere on the sweetpotato but usually occur near the stem end. When numerous infections from this fungus occur, the discolored spots often coalesce, making a continuous brown area.

§51.1612 Damage. (c) Scurf when more than 15 percent of the surface in the aggregate is affected by solid light brown discoloration. Speckled types of scurf, or lighter or darker shades of discoloration may be permitted over a greater or lesser area provided no discoloration detracts from the appearance more than the amount of solid light brown discoloration permitted;

Scurf is scored on the basis of the individual sweetpotato only. It rarely causes serious damage; as a guide, if more than 50% of the surface in the aggregate is affected by solid light brown discoloration, score as serious damage. Speckled types of scurf, or lighter or darker shades of discoloration may be permitted over a greater or lesser area; provided, no discoloration detracts from the appearance more than the amount of solid light brown discoloration permitted.

Shape (Q)

In describing shape of sweetpotatoes the type or variety should be considered in determining the proper terms or combination of terms to be used. Some varieties are naturally long in form while others are short and blocky. Usually there is a wide range in shape within the same variety. Inspectors should frequently refer to photographs illustrating shape.

To describe shape, use the following terms:

Well shaped means the sweetpotato may be slightly curved, crooked, constricted or otherwise slightly misshapen. While this term is not defined in the standards it should be used to provide a better description of the lot. Sweetpotatoes do not have to be perfect to be “well shaped.”

Fairly well shaped as defined in the standards:

§51.1611 Fairly well shaped. “Fairly well shaped” means that the sweetpotatoes are not so curved, crooked, constricted or otherwise misshapen as to materially detract from the appearance of the individual sweetpotato or the general appearance of the lot.

Fairly well shaped is a requirement of the U.S. Extra No. 1, U.S. No. 1, U.S. No. 1 Petite, and U.S. Commercial grades. Sweetpotatoes, which are constricted at or near the center of the sweetpotato, shall be scored as damage. Occasionally, sweetpotatoes are found constricted at one end forming a “tail.” As a guide, score damage when the length of the “tail” exceeds 3/4 length of the sweetpotato or if it materially detracts from the appearance. Otherwise, those sweetpotatoes may be reported in general terms at applicant’s request.

Misshapen means sweetpotatoes which are so curved, crooked constricted or otherwise misshapen as to materially detract from the appearance of the individual sweetpotato or the general appearance of the lot. Sweetpotatoes, which are lopsided or top-shaped, are scored as misshapen when materially detracting from the appearance. Likewise, those having sharp constrictions, especially when the constrictions occur near the center of the sweetpotato, and those that possess little or none of the taper normally associated with sweetpotatoes are also misshapen.

The U.S. No. 2 grade has no shape requirements.

Smoothness (Q)

Sweetpotatoes must be smooth to meet the requirements of U.S. Extra No. 1, while U.S. No. 1, U.S. No. 1 Petite, and U.S. Commercial grades specify fairly smooth.

§51.1609 Smooth. “Smooth” means that the sweetpotato is free from veining or other defects causing roughness which more than slightly detract from the appearance of the individual sweetpotato or the general appearance of the lot.

§51.1616 Fairly smooth. “Fairly smooth” means that the sweetpotato is free from veining or other defects causing roughness which materially detract from the appearance of the individual sweetpotato or the general appearance of the lot.

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

Note: Veining resembles raised tubular like areas running across the sweetpotato skins. See illustrations of veining on plaster model Number 1 “Maximum Veining Permitted in U.S. Extra No. 1” and model Number 2 “Maximum Veining Permitted in U.S. No. 1.”

Sprouts (C)

During the latter part of the storage season particular attention should be given to the firmness of the sweetpotatoes as well as to the condition in regard to sprouts. Temperatures above 60° F stimulate development of sprouts (especially at high humidity). They sometimes occur alone or in clusters. Their length varies according to what stage of growth they are in and progress rapidly at non-refrigerated temperatures.

§51.1612 Damage ... (a) Sprouts when more than 10 percent of the sweetpotatoes in the lot have sprouts over three-fourths inch in length;

Sprouting is usually not a serious problem until after long storage periods, even though occasionally they may show sufficient sprouts at time of shipping to affect the grade. U.S. Extra No. 1, U.S. No. 1, U.S. No. 1 Petite, and U.S. Commercial grades specify free from damage by sprouts which permits 10% of the sweetpotatoes to have sprouts more than 3/4 inch in length.

Unless there are more than 10% of the sweetpotatoes in a lot which show sprouts over 3/4 inch long, such a lot is to be certified as meeting the grade, providing of course they are not flabby or decidedly shriveled, and meet all other grade requirements. There is no limitation on the percentage of sprouts that can be over 3/4 inch long in individual containers, providing the average does not exceed 10%. The approximate length of sprouts affected even though the sprouts are not over 3/4 inch long shall be reported at applicant’s request in general terms on the notesheet and certificate as not affecting grade. For example: “Most cartons have few to many sweetpotatoes with sprouts from 1/8 inch up to 1/2 inch in length not affecting grade reported at applicant’s request.”

Sunken Discolored Areas (C)

These areas vary in size and are sunken in comparison with the adjacent surface. They are darker than the skin color of the sweetpotato and vary in degree of darkness from light brown to dark brown to black.

If sunken discolored areas do not fit the description of “Pox (Soil Rot),” which is a quality defect, then those sunken discolored areas are scored according to the general definitions of damage and serious damage. In the standards, those scoring guides for damage or serious damage are scored when detracting more than 5 or 10% respectively, of the weight of the sweetpotato or which materially or seriously detracts from the appearance or the edible or shipping quality of the individual sweetpotato.

Decay (C)

Decay is separated into soft rot and dry rot. There are many types of decay which affect sweetpotatoes, the most common of which are: Black Rot, Charcoal Rot, Rhizopus Rot, Java Black Rot, Ring Rot, Blue Mold Rot, Surface Rot, Root Rot, and Foot Rot. For descriptions of these decays, see Agriculture Handbook Number 155.

Dry Rot

Regardless of the area affected, or whether or not the sweetpotatoes are green or have been stored, **all dry rot is considered serious damage.**

Soft Rot or Wet Breakdown

Any rot which is soft, mushy or in a leaky condition is considered soft rot. **All grades have a 2% tolerance for soft rot or wet breakdown.**

Do not report the type of soft rot on the certificate. However, if soft rot is in excess of the tolerance, report the degree and advancement as: early, moderate, or advanced stages.

GRADE

Under this heading a definite statement pertaining to the grade of the lot or the percentage of U.S. No. 1 quality is to be reported.

When the load inspected consists of different lots, part of which are up to grade and part of which fail to meet the grade requirements, it will be necessary to make separate statements for the different lots.

The grades on each lot shall be reported correctly and grade statements that are indefinite or that tend to contradict what has been reported under the previous headings of the certificates shall be avoided. The grade statement is an interpretation of the facts previously given.

Whenever a lot is reported as failing to meet the requirements of a certain grade, the reason for its failure to grade must be given.

Reporting Percentages of U.S. No. 1 Quality

Percentage of U.S. No. 1 quality in a lot refers to the sweetpotatoes which would meet the requirements of the U.S. No. 1 grade without considering any tolerance whatsoever. In reporting percentages of U.S. No. 1 quality, always use multiples of five, except where the figures show 85 percent or more where exact percentages should be used, as for example: 86, 87, 88, 89, 91, 92, 93, and 94. The percentage of U.S. No. 1 quality is determined by subtracting from 100 the total percentage of undersize and oversize and all grade defects, thus: If the lot shows 12% defects and 2% total

undersize and oversize, the percentage of U.S. No. 1 quality should be reported as "Average 86% U.S. No. 1 quality."

Certifying U.S. No. 1 Quality When Sprouts Are a Factor

Under the definition of damage it is permissible for 10% of the potatoes to show sprouts more than 3/4 inch long in U.S. Extra No. 1, U.S. No. 1, U.S. No. 1 Petite, and U.S. Commercial. The lot would not be damaged until it averaged more than 10% sprouts more than 3/4 inch long. Therefore, in determining the percentage U.S. No. 1 quality, only the excess percentage (above 10%) should be added to the percentages of defects, decay, undersize and oversize and subtracted from 100.

Restricted Certificates

Shipping point inspection should generally cover the entire shipment loaded in any particular conveyance, but there may be occasions when it is impossible to properly inspect all parts of the load. The conveyance may be partly or completely loaded so as to make certain portions inaccessible, or the loading of a partly inspected conveyance may be completed and the conveyance "pulled" while the inspector is working elsewhere. In such cases, the certificate should be restricted to the part of the load that was actually inspected. A new heading "Remarks" should then be made at the bottom of the certificate, and the reason for the restriction shown.

Example: Certificate restricted to upper 2 layer cartons. Trailer fully loaded and remainder inaccessible at time of inspection.

Note: If the applicant desired the percentage of U.S. No. 1 quality in the grade statement, it would be necessary to show the percentage of off-size and defects under the appropriate headings.

APPENDIX I - U.S. GRADE STANDARDS

United States Standards for Grades of Sweetpotatoes¹

Effective April 21, 2005

Grades

- 51.1600 U.S. Extra No. 1.
- 51.1601 U.S. No. 1.
- 51.1602 U.S. No. 1 Petite.
- 51.1603 U.S. Commercial.
- 51.1604 U.S. No. 2.

Tolerances

- 51.1605 Tolerances.

Application of Tolerances

- 51.1606 Application of tolerances.

Definitions

- 51.1607 Similar varietal characteristics.
- 51.1608 Firm.
- 51.1609 Smooth.
- 51.1610 Fairly clean.
- 51.1611 Fairly well shaped.
- 51.1612 Damage.
- 51.1613 Length.
- 51.1614 Diameter.
- 51.1615 One type.
- 51.1616 Fairly smooth.
- 51.1617 Serious damage.

Grades

§51.1600 U.S. Extra No. 1.

“U.S. Extra No. 1” consists of sweetpotatoes of similar varietal characteristics which are firm, smooth, fairly clean, fairly well shaped, which are free from freezing injury, internal breakdown, Black Rot, other decay or wet breakdown, and free from damage caused by secondary rootlets, sprouts, cuts, bruises, scars, growth cracks, scurf, Pox (Soil Rot), or other diseases, wireworms, weevils, or other insects, or other means. (See §51.1605.)

- (a) **Size.** (1) Length shall be not less than 3 inches or more than 9 inches.
 - (2) Maximum weight shall be not more than 18 ounces.
 - (3) Maximum diameter shall be not more than 3-1/4 inches.
 - (4) Minimum diameter, unless otherwise specified, shall be not less than 1-3/4 inches.
- (See §51.1605.)

§51.1601 U.S. No. 1.

“U.S. No. 1” consists of sweetpotatoes of one type which are firm, fairly smooth, fairly clean, fairly well shaped, which are free from freezing injury, internal breakdown, Black

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.

Rot, other decay or wet breakdown, and free from damage caused by secondary rootlets, sprouts, cuts, bruises, scars, growth cracks, scurf, Pox (Soil Rot), or other diseases, wireworms, weevils or other insects, or other means. (See §51.1605.)

(a) **Size.** (1) Maximum diameter shall be not more than 3-1/2 inches.

(2) Maximum weight shall be not more than 20 ounces.

(3) Length, unless otherwise specified, shall be not less than 3 inches or more than 9 inches.

(4) Minimum diameter, unless otherwise specified, shall be not less than 1-3/4 inches. (See §51.1605.)

§51.1602 U.S. No. 1 Petite.

“U.S. No. 1 Petite” consists of sweetpotatoes of one type which are firm, fairly smooth, fairly clean, fairly well shaped, which are free from freezing injury, internal breakdown, Black Rot, other decay or wet breakdown, and free from damage caused by secondary rootlets, sprouts, cuts, bruises, scars, growth cracks, scurf, Pox (Soil Rot), or other diseases, wireworms, weevils or other insects, or other means. (See §51.1605.)

(a) **Size.** (1) Diameter shall be not less than 1-1/2 inches or more than 2-1/4 inches.

(2) Length shall be not less than 3 inches or more than 7 inches. (See §51.1605.)

§51.1603 U.S. Commercial.

“U.S. Commercial” consists of sweetpotatoes which meet all the requirements of the U.S. No. 1 grade except that an increased tolerance for defects is allowed. (See §51.1605.)

§51.1604 U.S. No. 2.

“U.S. No. 2” consists of sweetpotatoes of one type which are firm and which are free from freezing injury, internal breakdown, Black Rot, other decay or wet breakdown, and free from serious damage, caused by dirt or other foreign materials, cuts, bruises, scars, growth cracks, Pox (Soil Rot), or other diseases, wireworms, weevils or other insects, or other means. (See §51.1605.)

(a) **Size.** Unless otherwise specified the minimum diameter shall be not less than 1-1/2 inches and the maximum weight not more than 36 ounces. (See §51.1605.)

Tolerances

§51.1605 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) **Defects -- (1) U.S. Extra No. 1, U.S. No. 1 and U.S. No. 1 Petite grades.**

10 percent of the sweetpotatoes in any lot may fail to meet the requirements of these grades, but not more than one-half of this amount, or 5 percent, shall be allowed for sweetpotatoes which are seriously damaged, including therein not more than 2 percent for sweetpotatoes affected by soft rot or wet breakdown. (See §51.1606);

(2) **U.S. Commercial.** 25 percent of the sweetpotatoes in any lot may fail to meet the requirements of this grade, but not more than one-fifth of this amount, or 5 percent, shall be allowed for sweetpotatoes which are seriously damaged, including therein not more than 2 percent for sweetpotatoes affected by soft rot or wet breakdown. (See §51.1606); and,

(3) **U.S. No. 2.** 10 percent of the sweetpotatoes in any lot may fail to meet the requirements of this grade, including therein not more than 2 percent for sweetpotatoes affected by soft rot or wet breakdown. (See §51.1606.)

(b) **Off-size.** 10 percent of the sweetpotatoes in any lot may fail to meet any specified size, but not more than one-half of this amount, or 5 percent, shall be allowed for sweetpotatoes which are below the minimum diameter and minimum length specified. (See §51.1606.)

Application of Tolerances

§51.1606 Application of tolerances.

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

Provided, That the averages for the entire lot are within the tolerances specified for the grade.

(a) Packages which contain more than 10 pounds shall have not more than one and one-half times a specified tolerance of 10 percent or more, or not more than double a specified tolerance of less than 10 percent, except that at least one defective and one off-size specimen may be permitted in any package; and,

(b) Packages which contain 10 pounds or less shall have not more than four times the tolerance specified or not more than two defective or off-size specimens in any package, whichever is the larger percentage.

Definitions

§51.1607 Similar varietal characteristics.

“Similar varietal characteristics” means that the sweetpotatoes have the same character of flesh and practically the same skin color. For example, dry type shall not be mixed with semi-moist or moist type.

§51.1608 Firm.

“Firm” means not more than slightly flabby or shriveled.

§51.1609 Smooth.

“Smooth” means that the sweetpotato is free from veining or other defects causing roughness which more than slightly detract from the appearance of the individual sweet potato or the general appearance of the lot.

§51.1610 Fairly clean.

“Fairly clean” means that the individual sweetpotato is not caked with dirt and that dirt or other foreign matter does not materially detract from the general appearance of the lot.

§51.1611 Fairly well shaped.

“Fairly well shaped” means that the sweetpotatoes are not so curved, crooked, constricted or otherwise misshapen as to materially detract from the appearance of the individual sweetpotato or the general appearance of the lot.

§51.1612 Damage.

“Damage” means any specific defect defined 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 sweetpotato or the lot as a whole; or which cannot be removed without a loss of more than 5 percent of the total weight of the sweetpotato including peel covering the defective area. The following specific defects shall be considered as damage:

(a) Sprouts when more than 10 percent of the sweetpotatoes in the lot have sprouts over three-fourths inch in length;

(b) Growth cracks when unhealed or which detract materially from the appearance of the individual sweetpotato or general appearance of the lot;

(c) Scurf when more than 15 percent of the surface in the aggregate is affected by solid light brown discoloration. Speckled types of scurf, or lighter or darker shades of discoloration may be permitted over a greater or lesser area provided no discoloration detracts from the appearance more than the amount of solid light brown discoloration permitted;

(d) Pox (Soil Rot) when materially detracting from the appearance of the individual sweetpotato; and,

(e) Wireworm, grass root or similar injury when any hole in a sweetpotato ranging in size from 6 to 8 ounces, is more than three-fourths inch long, or when the aggregate length of all holes is more than 1-1/4 inches, or correspondingly shorter or longer holes in smaller or larger sweetpotatoes.

§51.1613 Length.

“Length” means the dimension of the sweetpotato, measured in a straight line between points at or near each end of the sweetpotato where it is at least three-eighths inch in diameter.

§51.1614 Diameter.

“Diameter” means the greatest dimension of the sweetpotato, measured at right angles to the longitudinal axis.

§51.1615 One type.

“One type” means that the sweetpotatoes have the same character of flesh, and do not show an extreme range in skin color. For example, dry type shall not be mixed with semi-moist, or moist type, and deep red or purple skin color shall not be mixed with yellow or reddish copper skin color.

§51.1616 Fairly smooth.

“Fairly smooth” means that the sweetpotato is free from veining or other defects causing roughness which materially detract from the appearance of the individual sweetpotato or the general appearance of the lot.

§51.1617 Serious damage.

“Serious damage” means any specific defect defined in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance or edible or shipping quality of the individual sweetpotato or the lot as a whole; or which cannot be removed without a loss of more than 10 percent of the total weight of the sweetpotato including peel covering the defective area. The following specific defects shall be considered as serious damage:

(a) Dirt or other foreign matter when the individual sweetpotato is badly caked with dirt, or when seriously detracting from the appearance of the lot;


(b) Growth cracks when unhealed or when seriously detracting from the appearance of the individual sweetpotato or general appearance of the lot;

(c) Pox (Soil Rot) when seriously detracting from the appearance of the individual sweetpotato; and,

(d) Wireworm, grass root or similar injury when any hole in a sweetpotato ranging in size from 6 to 8 ounces, is more than 1-1/4 inches long, or when the aggregate length of all holes is more than 2 inches, or correspondingly shorter or longer holes in smaller or larger sweetpotatoes.

Certificate Examples

Certificate Example 1

		U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE http://FPBInspections.ams.usda.gov		INSPECTION CERTIFICATE T-EXAMPLE	
				PAGE 1 of 1	
CARRIER or LOT ID: PO# 123456		APPLICANT: (000000000) HOOSAC FOODS		REQUESTED:	3/14/2007 1:00 PM
LOADING STATUS: UNLOADED		BRATTLEBORO, VT		STARTED:	3/14/2007 3:08 PM
STATED BY: APPLICANT		SHIPPER: BIRCH FARMS		COMPLETED:	3/14/2007 4:24 PM
ADDITIONAL ID: NA		FAISON, NC		PASSWORD FOR ONLINE ACCESS	
CARRIER TYPE: NA		MARKET OFFICE: NEWARK, NJ		EXAMPLE 123ABC	
REFRIG UNIT: NA	DOORS: NA	INSP SITE: APPLICANT'S WAREHOUSE		ESTIMATED FEE:	\$157.50
REMARKS:					

LOT A (QAC) - SWEETPOTATOES			
TEMP:	54° to 56°F	INSP CT:	YES
NUMBER OF CONTAINERS:			1000 CARTON(S)
ORIGIN:			NC
MARKINGS:	BRAND: YUMMY YAMS MARKINGS: PACKED BY BIRCH FARMS FAISON, NC 40 LBS NET WT WASHED WAXED		

PLI: NONE	OTHER ID:
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INJURY	DAM	SER DAM	V.S. DAM	OFFSIZE/DEFECTS
NA	2	0	NA	QUALITY DEFECTS (0 to 4%)(CUTS, WEEVIL DAMAGE, GRUB DAMAGE)
NA	5	0	NA	SURFACE DISCOLORATION FOLLOWING SKINNING (0 to 9%)
NA	1	1	NA	DRY ROT (0 to 3%)
NA	0	0	NA	SOFT ROT
NA	8	1	NA	CHECKSUM


GRADE:	U.S. NO. 1.
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LOT DESC:	WEIGHT: 6 TO 20 OUNCES, MOSTLY 12 TO 16 OUNCES LENGTH: 3-1/2 TO 9 INCHES, MOSTLY 5 TO 8 INCHES DIAMETER: GENERALLY 1-3/4 TO 3-1/4 INCHES, MOSTLY 2 TO 2-1/2 INCHES BRIGHTNESS: BRIGHT CLEANNESS: CLEAN FIRMNESS: FIRM DISCOLORATION: COLOR(S): DARK BROWN OVER 3-1/4 INCH DIA: 3% TO 5% AVG 2% UNDER 1-3/4 INCH MIN DIA.: 3% TO 3% AVG 1% TEMPERATURES(3): 54°F, 55°F, 56°F
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I, the undersigned, a duly authorized inspector of the United States Department of Agriculture, do hereby certify that at the request of the applicant and on the date indicated, samples of the herein described product were inspected and the quality and/or condition as shown by said samples were as herein stated.

Warning: Any person who knowingly shall falsely make, issue, alter, forge, or counterfeit this certificate or participate in any such actions, is subject to a fine of not more than \$1,000 or imprisonment for not more than one year, or both. FORM FV-E300 (1.0.11.1)	Signature: I.M. INSPECTOR <i>I.M. Inspector</i>	Date: 3/14/2007
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Certificate Example 2

		U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE http://FPBInspections.ams.usda.gov		INSPECTION CERTIFICATE T-EXAMPLE	
				PAGE 1 of 1	
CARRIER or LOT ID: TOG19L NJ		APPLICANT: (000000000) LIZA'S PRODUCE		REQUESTED: 6/3/2007 6:30 AM	
LOADING STATUS: UNLOADED		ELIZABETH, NJ		STARTED: 6/3/2007 8:09 AM	
STATED BY: APPLICANT		SHIPPER: TRISTATE FARMS		COMPLETED: 6/3/2007 8:50 AM	
ADDITIONAL ID: P. O. NO. 597635		NEWFIELD, N. J.		PASSWORD FOR ONLINE ACCESS	
CARRIER TYPE: NA		MARKET OFFICE: NEWARK, NJ		EXAMPLE 123ABC	
REFRIG UNIT: NA	DOORS: NA	INSP SITE: APPLICANT'S WAREHOUSE		ESTIMATED FEE: CONTRACT	
REMARKS: [REDACTED]					
LOT A (QAC) - SWEETPOTATOES					
TEMP: 56° to 62°F		INSP CT: YES		NUMBER OF CONTAINERS: 998 CARTON(S)	
ORIGIN: NJ					
MARKINGS: BRAND: TASTY YAMS					
MARKINGS: YAMS/SWEET POTATOES PRODUCE OFUSA 40 LBS. TRISTATE FARMS NEWFIELD, N. J.					
PLI: NONE			OTHER ID: [REDACTED]		
INJURY	DAM	SER DAM	V.S. DAM	OFFSIZE/DEFECTS	
NA	6	2	NA	QUALITY DEFECTS (0 to 13%)(WIREWORM, SHATTER BRUISES)	
NA	1	0	NA	BROKEN ENDS (0 to 3%)	
NA	0	0	NA	SOFT ROT	
NA	7	2	NA	CHECKSUM	
GRADE: U.S. NO. 1.					
LOT DESC: WEIGHT: FROM 4 TO 12, MOSTLY 6 TO 10 OUNCES. LENGTH: FROM 4 TO 10, MOSTLY 5 TO 7 INCHES IN LENGTH. DIAMETER: FROM 17/8 TO 31/4, MOSTLY 21/4 TO 3 INCHES. BRIGHTNESS: BRIGHT CLEANNESS: CLEAN COLOR: WELL COLORED. PACK: WELL FILLED.					
[REDACTED]					
I, the undersigned, a duly authorized inspector of the United States Department of Agriculture, do hereby certify that at the request of the applicant and on the date indicated, samples of the herein described product were inspected and the quality and/or condition as shown by said samples were as herein stated.					
Warning: Any person who knowingly shall falsely make, issue, alter, forge, or counterfeit this certificate or participate in any such actions, is subject to a fine of not more than \$1,000 or imprisonment for not more than one year, or both.			Signature: I.M. INSPECTOR <i>I.M. Inspector</i>		Date: 6/3/2007
FORM FV-E300 (1.0.11.1)					