

United States
Department of
Agriculture

Agricultural Marketing Service

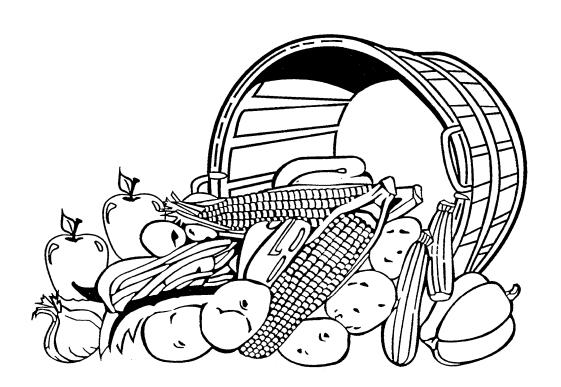
Fruit and Vegetable Programs

Fresh Products Branch

November 2008

Broccoli

Shipping Point and Market Inspection Instructions



Shipping Point and Market Inspection Instructions for Italian Sprouting Broccoli

These inspection instructions are specifically developed and designed by the Fresh Products Branch to assist officially licensed inspectors in the interpretation and application of the U.S. Standards for Grades of Italian Sprouting Broccoli, Section 51.3555.

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 General Inspection Instructions for additional information pertaining to date, inspection point, carrier, condition of carrier, lading, etc. not covered in these instructions. Reference to "General Inspection Instructions" in all Fresh Product 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 a section number such as 51.--- and followed with **bold** print are sections or portions of sections copied directly from the U.S. standards. The U.S. Standards for Grades of Italian Sprouting Broccoli are printed in the appendix of this instruction. All of the U.S. standards are available on the internet under the USDA homepage.

November 2008

This replaces inspection instructions dated, March 1999.

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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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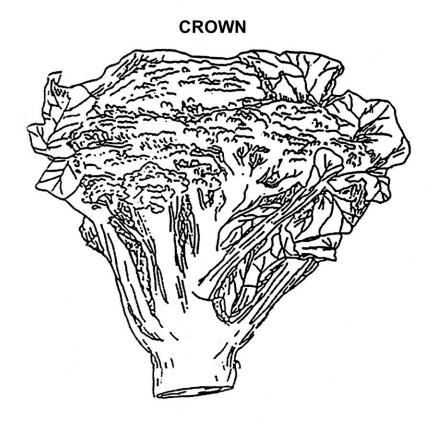
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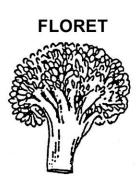
Diagram of Head and Shoot of Broccoli

HEAD: The average diameter is 2-1/4 inches or larger. SHOOT: The average diameter is under 2-1/4 inches. **BUD CLUSTER** BUDS **STEM STEM** BUTT BUTT

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Diagram of Broccoli Crown and Floret





GENERAL

Broccoli is derived from the Latin for "branch" or arm" and the Italian for "shooting stalk." It is a member of the cabbage family and most closely resembles cauliflower. California grows over 90 percent of the broccoli in the U.S., followed by Arizona in second place and Maine in third.

The U.S. Standards for Grades of Italian Sprouting Broccoli apply to Bunched Broccoli, Broccoli Crowns and Broccoli Florets. Bunched broccoli are stalks bound together to form a single unit. Broccoli crowns are the heads of stalks that have cut off or shortened stems. Broccoli florets are bud clusters or pieces of bud clusters closely trimmed from the head, with the remaining stalk usually being one inch or less.

Note: Refer to the handbook for Fresh-Cut Produce if broccoli florets are packaged in a mix with other fresh cut commodities such as cauliflower, carrots, etc.

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.

Size of Sample

The tolerances of the U.S. Standards for Grades of Italian Sprouting Broccoli for quality and condition defects and size are determined on the basis of count. When not fairly uniform in size, percentages are determined on the basis of weight.

§51.3561 Fairly uniform. "Fairly uniform" means:

- (a) For bunched broccoli: Bunches are considered fairly uniform if the diameter of the bunches within the container do not vary more than three inches.
- (b) For broccoli crowns: Crowns are considered to be fairly uniform if the diameter of the crowns within the container do not vary more than three inches.
- (c) For broccoli florets: Florets are considered fairly uniform if the diameter of the florets within the sample do not vary more than 1-1/2 inches.

The **sample size** for bunched broccoli and broccoli crowns will be the entire container. When in bulk bins the sample size will be a **minimum of 25 specimens**, **if not fairly uniform then it will be 25 lbs**. Broccoli bunches generally contain two or three stalks of broccoli. The entire bunch, not the individual stalk, is the unit of inspection when determining quality and condition. However, when determining size the individual stalk is the unit of inspection.

The sample size for broccoli florets will consist of a minimum 100 count when packed loose in cartons or service packs. When broccoli florets are not fairly uniform, the sample size will consist of a minimum of 2 pounds, or the individual consumer unit. For florets packed in bulk or in nontraditional packs, sample on a similar basis. Broccoli florets are considered fairly uniform if the diameter of the florets do not vary more than 1-1/2 inches within the sample.

Numbers of Samples

As a general rule a minimum of 1% of the lot must be examined. For lots of less than 300 packages a minimum of 3 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.

TOLERANCES AND APPLICATION OF TOLERANCES

§51.3559 Tolerances. In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances are provided as specified:

For Bunched Broccoli.

- (a) For defects. Ten percent for bunches in any lot which fail to meet the requirements of the specified grade, including therein not more than 2 percent for bunches which are affected by decay.
- (1) Percentages shall be determined on the basis of count, except that when bunches are not fairly uniform in size, percentages shall be determined on the basis of weight.
- (b) For size. (1) Ten percent, percentages shall be determined on the basis of count, except that when bunches are not fairly uniform in size, percentages shall be determined on the basis of weight, for stalks in any lot which fail to meet the size requirements of the specified grade or any sizes specified for length and diameter.
- (2) When a percentage of broccoli in a lot is specified to be "heads" or of a certain diameter and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole; but

individual containers may have not more than 15 percentage points less than the percentage specified: Provided, That the entire lot averages within the percentage specified.

For Broccoli Crowns.

- (a) For defects. Ten percent for crowns in any lot which fail to meet the requirements of the specified grade, including therein not more than 2 percent for crowns which are affected by decay.
- (1) Percentages shall be determined on the basis of count, except that when crowns are not fairly uniform in size, percentages shall be determined on the basis of weight.
- (b) For size. (1) Ten percent, percentages shall be determined on the basis of count, except when crowns are not fairly uniform in size, percentages shall be determined on the basis of weight, for crowns in any lot which fail to meet the size requirements of the specified grade or any sizes specified for length and diameter.
- (2) When a percentage of the broccoli in a lot is specified as a certain diameter and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole; but individual containers may have not more than 15 percentage points less than the percentage specified: Provided, That the entire lot averages within the percentage specified.

For Broccoli Florets.

- (a) For defects. Ten percent for florets in any lot which fail to meet the requirements of the specified grade, including therein not more than 2 percent for florets which are affected by decay.
- (1) Percentages shall be determined on the basis of count, except that when florets are not fairly uniform in size, percentages shall be determined on the basis of weight.
- (b) For size. (1) Ten percent, percentages shall be determined on the basis of count, except when florets are not fairly uniform in size, percentages shall be determined on the basis of weight, for florets in any lot which fail to meet the size requirements of the specified grade or any sizes specified for length and diameter.
- (2) When a percentage of the broccoli florets in a lot is specified to be of a certain diameter and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole; but individual containers may have not more than 15 percentage points

less than the percentage specified: Provided, That the entire lot averages within the percentage specified.

The tolerances for bunched broccoli, broccoli crowns, and broccoli florets are summarized below:

Total Defects 10% including decay 2%

Total Off-size 10%

Note: The defect tolerance is determined on the basis of count or, when sample is not fairly uniform, by weight. The tolerance for size is also based on count when fairly uniform; otherwise, it is based on weight. The size tolerance applies only to length (stalk) and diameter (head), not the count of bunches, weight of bunches, diameter of butts or number of stalks per bunch.

Application of Tolerances

§51.3560 Application of tolerances.

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

For Bunched Broccoli.

- (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 bunches or less, individual packages may contain not more than double the tolerance specified: Provided, That the averages for the entire lot are within the tolerances 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 bunch which does not meet the requirements shall be allowed in any one package. And provided further, That the averages for the entire lot are within the tolerances specified for the grade.

For Broccoli Crowns.

(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 when the package contains 15 crowns or less, individual packages may contain not more than double the tolerance

specified: Provided, That the averages for the entire lot are within the tolerances 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 crown which does not meet the requirements shall be allowed in any one package. And provided further, That the averages for the entire lot are within the tolerances specified for the grade.

For Broccoli Florets.

- (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 when the package contains 3 pounds or less, individual packages may contain not more than double the tolerance specified: Provided, That the averages for the entire lot are within the tolerances 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 the averages for the entire lot are within the tolerances specified for the grade.

The application of tolerances for bunched broccoli, broccoli crowns, and broccoli florets are summarized below:

Packages containing more than 15 bunches, or more than 15 crowns, or more than 3 pounds of florets:

Total Defects $10\% \times 1-1/2 = 15\%$

Including decay $2\% \times 2 = 4\%$

Total Offsize $10\% \times 1-1/2 = 15\%$

Packages containing 15 bunches or less, or 15 crowns or less, or 3 pounds or less of florets:

Total Defects $10\% \times 2 = 20\%$

Including decay $2\% \times 2 = 4\%$

Total Offsize $10\% \times 2 = 20\%$

Except that at least **one defective bunch** or **one defective crown** will be allowed in any one package provided the averages of the entire lot are within the tolerances specified for the grade.

NOTESHEET AND CERTIFICATE

Entries on the notesheet and certificate must be kept in a legible and accurate manner. It is mandatory that all information which 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 will be recorded so that anyone familiar with inspection procedures can interpret them and write a certificate. Also, 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 you additional information and instructions.

Product

"Broccoli" will be used to describe this commodity in the "Product" heading. Type (Bunched, Crowns, Florets) must be reported in conjunction with broccoli or be reported in the "Product/Variety" section on the shipping point inspection certificate or in the "Lot ID" section on a market notesheet and certificate.

Number/Type of Containers

The number of containers will always be reported. In the market and at shipping point locations for stationary lot certification, the inspector will always verify the container count provided by the applicant for each lot and report it as the "inspector's count." 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).

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.

The most commonly used containers for shipping broccoli are wire-bound crates or waxed fiberboard cartons with the latter being the most widely used. The crates are generally used only when shipping within the production area. The type of container will always be reported under this heading.

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.

Origin

The inspector 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 for the applicant. This practice 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 verifying what State or country the broccoli is grown.

CONDITION OF PACK

Bunched broccoli and broccoli crowns are generally packed in cartons two layers deep. The following terms are used to describe the tightness of the pack. Tightness refers to bunches within the layers and not the tightness of the contents against the top of the carton.

Very Tight. The bunches are so tightly packed that it may cause bruising.

Tight. Meaning that the broccoli is packed in such a way that the carton is sufficiently filled to prevent movement of the bunch from end to end or side to side of the carton.

Fairly Tight. This pack is somewhat loose allowing for very slight movement within the container, but not enough to cause injury under normal handling conditions.

Slack. Pack is definitely loose, allowing for considerable movement. The amount of slackness will be reported in inches or fractions of an inch below the top of the container.

Pack Ice

The presence or absence of pack ice can be a very important factor in broccoli inspections. Therefore, in addition to reporting the tightness of the pack, report the amount of pack ice in the cartons. The following should be used to report the amount of pack ice: "No pack ice," "Small amount of pack ice," or "Good amount of pack ice." For example, "Fairly tight, most good amount of pack ice, some small amount."

TEMPERATURE OF PRODUCT

Inspectors would not normally determine or report temperatures at shipping point. However, due to the importance of the pulp temperature of fresh fruits and vegetables when in transit or at destination, it is essential that the inspector accurately determine and report the temperature or range in temperatures on each lot. Pulp temperature should be reported regardless of the location of the product, whether in the carrier, warehouse, or stacked on the platform. Pre-cool the thermometer in order to obtain true readings and report all temperatures to the nearest whole degree.

A minimum of three temperatures for each lot must be taken and recorded on the notesheet. More temperatures must be taken if the lot is abnormally cold, heated, or there is a specific request for temperature, and these must be reported in greater detail specifying location in lot or load.

SIZE

Size is determined on the basis of weight, bunches must be taken apart and size factors determined separately.

Bunched Broccoli – Size Requirement Chart

Bunched Broccoli			
GRADE	DIAMETER	LENGTH	
GNADE	DIAMILILI	Minimum	Maximum
U.S. Fancy	2-1/2 inches minimum	6 inches UOS*	8-1/2 inches UOS*
U.S. No. 1	No requirement; may be specified	5 inches UOS*	9 inches UOS*
U.S. No. 2	No requirement; may be specified	No requirement; m	nay be specified
	*UOS = Unless Other	wise Specified	

Broccoli Crowns – Size Requirement Chart

Broccoli Crowns				
		LENGTH		
GRADE	DIAMETER	Minimum	Maximum	
U.S. Fancy	Not less than 2-1/2 inches or more than 5 inches	2-1/2 inches UOS**	5 inches UOS**	
U.S. No. 1	No requirement; may be specified	3-1/2 inches UOS**	6 inches UOS**	
U.S. No. 2	No requirement; may be specified	•	nent; may be cified	
	**UOS = Unless Otherwi	se Specified		

Broccoli Florets – Size Requirement Chart

	Broccoli Florets		
		LENGTH	
GRADE	DIAMETER	Minimum	Maximum
U.S. Fancy	Not less than 3/4 inch or more than 3 inches	1 inch UOS**	3-1/2 inches UOS**
U.S. No. 1	Not less than 1 or more than 4 inches	1-1/2 inches UOS**	4-1/2 inches UOS**
U.S. No. 2	No requirement; may be specified	No requirem	,
	**UOS = Unless Otherw	ise Specified	

§51.3558 Size specifications.

Bunched Broccoli.

- (a) Diameter. The terms "heads" and "shoots" may be used to designate size of stalks in connection with U.S. No. 1 and U.S. No. 2 grades. If heads and shoots are mixed, the percentage, by weight, of heads contained in the lot may be specified.
- (1) The minimum or maximum diameter, or both, in terms of inches and quarter inches, in the U.S. No. 1 and U.S. No. 2 grades, may be specified for the lot as a whole or for a certain percentage, by weight or by count (when fairly uniform), of the lot; for example: "2 inches minimum," or "50 percent 3-1/4 inches or larger," or "75 percent 2-1/2 inches or larger."
- (b) Length. The minimum or maximum length, or both, in terms of inches or half inches, may be specified for all grades in connection with the grade in accordance with the facts; for example: "7 inches minimum length," or "6-1/2 to 8-1/2 inches long."

Broccoli Crowns.

- (a) Diameter. (1) For U.S. No. 1 and U.S. No. 2 grades, the minimum or maximum diameter, or both, in terms of inches and quarter inches, may be specified for the lot as a whole or for a certain percentage, by weight or count (when fairly uniform), of the lot.
- (b) Length. The minimum or maximum length, or both, in terms of inches or half inches, may be specified for all grades in connection with the grade in accordance with the facts.

Broccoli Florets.

§51.3556 U.S. No. 1. (Requirement of the grade.)

For Broccoli Florets. (c) The diameter of each floret shall be not less than 1 inch or more than 4 inches. Unless otherwise specified, the length of each floret shall not be less than 1-1/2 inch or more than 4-1/2 inches.

It is important to note that when size is specified in connection with the grade for the diameter of the head, it is specified in inches or **quarter** inches. Specified lengths are reported in inches or **half** inches.

Reporting Size

The following terms defined in the standard are used in conjunction with describing the size of broccoli.

§51.3562 *Stalk.* "Stalk" means a portion of the broccoli plant including the stem, bud clusters and leaves. Individual stalks may be designated as "heads" or "shoots" as follows:

- (a) "Head" means a stalk of broccoli having a cluster of closely associated buds which is 2-1/4 inches or larger in diameter.
- (b) "Shoot" means a stalk of broccoli having bud clusters which fail to meet the requirements for a head.

§51.3563 *Bunch.* "Bunch" means stalks bound together to form a unit. A single stalk may be considered a bunch if it is approximately as large as other bunches in the lot.

When reporting size (length and/or diameter when applicable) a range must be reported. Dimensions will be reported in inches and fractions of inches. If there is a wide range in size, it is desirable to show the size of "most" of the specimens in order to give the general size impression of the lot. Size columns are to be kept on notesheets to substantiate the size reported on the certificate. When size is otherwise specified, it is reported in connection with the grade. For example, "U.S. No. 2, 3 inch minimum diameter."

Occasionally, applicants request that the diameter of the butt, the number of stalks per bunch or the weight of the bunches (report to the nearest 1/4 pound) be reported. The range and average for the lot is to be reported in the "OTHER" section on market certificates and the "Description of Product" section on shipping point certificates. It will be necessary to state in the "REMARKS" section of the certificate and notesheet "Reported at applicant's request." Tolerances do not apply to these types of size requests (see tolerances and application of tolerances).

Diameter

§51.3572 *Diameter.* "Diameter" means the average measurement across the bud cluster at the top of the stalk, crown, or floret.

To determine the average diameter of the stalk measure the largest and smallest width of the stalk, crown, or floret (across the bud clusters), add them together and then divide by two.

The terms "heads" and "shoots" may be used to designate size of stalks in connection with U.S. No. 1 and U.S. No. 2 grades. If heads and shoots are mixed, the percentage by weight of heads contained in the lot may be specified. In order to

determine the percentage of each it will be necessary to open several bunches and separate the heads from the shoots.

The U.S. Fancy grade requires that the heads be not less than 2-1/2 inches in diameter. However, **larger** minimums may be specified. There are no diameter requirements for either U.S. No. 1 or U.S. No. 2, but the minimum or maximum diameter or both may be specified for the lot as a whole, or for a certain percentage by weight of the lot.

<u>Length</u>

§51.3573 *Length.* "Length" means the total length of the stalk measured from the base of the stem to the top of the bud cluster.

The U.S. Fancy requires that each stalk will be not less than 6 inches or more than 8-1/2 inches in length. It is **not** permissible to specify a smaller minimum or a larger maximum length. However, a larger minimum and a smaller maximum may be specified.

The U.S. No. 1 grade requires that, **unless otherwise specified**, each stalk be not less than 5 inches and not more than 9 inches. It is permissible to specify a smaller or larger minimum or maximum length. There are no length requirements for U.S. No. 2 grade, however, it may be specified.

Marking as to Count

Broccoli cartons are generally marked as to count of bunches. When containers are marked to count and **do not** conform to count, report this in the "OTHER" section on market certificates and in the "Description of Products" section on shipping point certificates. Report the range and average of bunches per container, as well as the percentage of containers not conforming to count. For example: "Counts range from 11 to 15, average 14; 30% of cartons fail to meet count as marked." This may be a misbranding violation see "PACA Ruling on Grade and Size Markings," in the *General Inspection Instructions* for further instructions.

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.

Blighted Buds (Q)

Blight affects the broccoli as it is growing. Affected broccoli usually has dry, hard yellowish to brown buds or bud clusters.

Scoring Guide

For <u>Broccoli Bunches and Broccoli Crowns</u>, score as **damage** when the affected area exceeds a circle 1 inch in diameter (aggregate area). Score as **serious damage** when the affected area exceeds a circle 1-1/2 inch in diameter (aggregate area).

For <u>Broccoli Florets</u>, score as **damage** when affected area exceeds more than 1/4 inch diameter (aggregate area). Score as **serious damage** when the affected area exceeds more than 1/2 inch in diameter (aggregate area).

Bruising (C)

Bruising may result from a very tight pack, excessive pack ice or rough handling. It can affect the bud clusters, stalks, butt and sides of the bunch or crowns; florets could also (to a lesser extent) be affected by bruising.

Scoring Guide

Score as **damage** when it materially affects or detracts from the appearance of the bunch, crown or floret; score as **serious damage** when it seriously affects or detracts from the appearance of the bunch, crown or floret.

Cleanness (Q)

Cleanness refers to dirt or other foreign material on/in the broccoli. The U.S. grades have the following requirements for cleanness:

- U.S. Fancy & U.S. No. 1: Free from damage by dirt or other foreign material.
- U.S. No. 2: Free from serious damage by dirt or other foreign material.

Scoring Guide

Broccoli will be considered **damaged** by dirt when the appearance is materially affected and **serious damage** when the appearance is seriously affected.

Compactness (Q)

The U.S. Standards for Grades for Italian Sprouting Broccoli have the following requirements for compactness of bud clusters:

- U.S. Fancy: Generally compact.
- U.S. No. 1: Generally fairly compact.
- U.S. No. 2: No requirements.

Definitions

§51.3565 Compact. "Compact" means that the individual buds in the bud clusters are generally small and tightly crowded together, and that the bud clusters on the stalk are generally close together and feel fairly firm and moderately resistant to pressure.

§51.3566 Fairly compact. "Fairly compact" means that the individual buds and bud clusters on the stalk are generally close together so that the top of the clusters do not have a ragged appearance or feel very soft.

Compactness refers to the location of individual buds and bud clusters on the stalks and is not subject to change. The buds will **open** rather than spread.

Discoloration (C)

The most desirable color for the entire broccoli stalk is green to dark green. It must be noted that some varieties of broccoli often have a purplish to blue cast over the bud clusters. This cast is characteristic for some varieties of broccoli. Broccoli with these colors would not be scored (refer to visual aid BRO-1-IDENT).

Bud Clusters

§51.3564 *Damage.* (b) Discoloration of bud clusters, when the appearance of the broccoli is materially affected by buds which have a noticeably yellowish, brownish, or reddish cast in contrast to the desirable good green color. A bluish or purplish cast over the green is often characteristic of good broccoli and shall not be considered as damage.

§51.3571 Serious Damage. (a) Discoloration of bud clusters, when the buds have a decidedly yellowish, brownish, or reddish cast which seriously detracts from the appearance of the broccoli. A bluish or purplish cast over the green is often characteristic of good broccoli and shall not be considered as serious damage.

Leaves

§51.3564 *Damage.* (c) Discoloration of leaves, when the appearance of the broccoli is materially affected by discolored leaves or parts of leaves.

§51.3571 Serious Damage. (b) Discoloration of leaves, when the appearance of the broccoli is seriously affected by discolored leaves or parts of leaves.

The U.S. Fancy and U.S. No. 1 grades require broccoli to be free from damage by discolored bud clusters and leaves. The U.S. No. 2 grade requires broccoli to be free from serious damage by discolored bud clusters and leaves. The most common discolorations affecting broccoli are distinct yellow and brown colors usually affecting the buds and to a lesser extent leaves.

Bunched broccoli, broccoli crowns, and broccoli florets may show discoloration in association with wilting, flabbiness, age, heat and/or lack of ice. Yellow bud clusters may appear in overmature broccoli. Poor storage conditions such as less than optimal temperatures and exposure to ethylene producing fruit, which broccoli is sensitive to, may also cause bud discoloration.

Scoring Guide

The following guideline defines materially and seriously detracting from the appearance for **bud clusters**.

For <u>Bunched Broccoli and Broccoli Crowns</u>, score as **damage** when the affected area exceeds a circle 1/2 inch in diameter (aggregate area). Score as **serious damage** when the affected area exceeds a circle 1 inch in diameter (aggregate area).

For <u>Broccoli Florets</u>, score as **damage** when the affected area exceeds a circle 1/8 inch in diameter (aggregate area); **serious damage** when the affected area exceeds 1/4 inch in diameter (aggregate area).

Freezing and Freezing Injury (C)

The term "frozen" should only be used when ice crystals are present. Frozen broccoli or portions of broccoli in a frozen state will be darker green and glassy in comparison to non-frozen stock, with a distinct line of demarcation between the affected and the unaffected portion. When cut, stems and butts may show an abnormal amount of watersoaking and translucency.

"Freezing injury" is the term that should be used when it is evident that the broccoli has been frozen but is not in a frozen condition at the time of inspection. The broccoli may be limp, flabby and the affected areas may be dark, watersoaked and dull in appearance with a lack of luster. Bud clusters may be dry and shatter readily when handled.

When reporting freezing or freezing injury it is important to give the following information:

- Record pulp temperatures taken at various locations.
- Determine and record extent of the injury in the load.
- Determine and record extent of the injury in the containers.
- Determine and record degree to which individual specimens are affected.
- Describe the **pattern** of freezing or freezing injury in clear concise terms.

When the location of injury indicates where or when the freezing occurred this is to be stated. For example: "Freezing injury so located as to indicate occurred after packing but not in present location."

Package and Top Ice Freezing

Broccoli is generally shipped with top and pack ice. Freezing from top ice may occur not only over the top layer of the load, but next to the side walls or next to packages in the upper layers where finely crushed top ice has shifted into the spaces between rows. Pack ice freezing occurs when broccoli in contact with package ice freezes due to improper cooling characteristics of the ice. This injury, as well as that of top ice, is caused by using ice that has been stored at temperatures well below the freezing point or by ice made with a high percentage of salt or sodium.

When reporting freezing due to pack ice, no attempt should be made to show it occurred in car or trailer. This type of freezing may occur after packing, before loading, or it can occur after the product is loaded.

Freezing of Melted Pack Ice

Although rare, another type of transit freezing which affects practically only broccoli is freezing from melted pack ice. This occurs when broccoli is harvested during high temperatures, pack ice is then inserted and cartons are immediately loaded into a trailer. The warm broccoli emitting field heat melts much of the pack ice, causing water to collect in the bottom of wax-impregnated cartons. As the load travels eastward it may encounter severe winter temperatures, the melted package ice (water), then refreezes. This refreezing can cause a solid layer of ice to form in the bottom of the carton (especially floor layer) and may embed the broccoli into the ice. As with all types of freezing, describe as accurately as possible.

Freshness (C)

Freshness refers to the succulence and turgidity of the bunches. It is unlikely that lack of freshness will be a factor. However, when encountered it is generally because of the lack of pack or top ice. The following terms are to be used when describing freshness:

Fresh. The broccoli has normal succulence, brightness and firmness.

Wilted. The broccoli is drooping and lacks firmness.

Flabby. The broccoli is soft, limp and pliable.

Scoring Guide

Broccoli that is wilted or flabby will be scored when the appearance, edible or marketing quality is materially or seriously affected using the general definition of damage and serious damage respectively.

Hollow Stems (Q)

Certain growing conditions will cause broccoli to develop hollow stems, such as plant spacing and boron deficiency.

Scoring Guide

Score <u>Bunched Broccoli or Broccoli Crowns</u>, as **damage** when the opening extends more than 3 inches up into the stem or up the entire length of the stem when shorter than 3 inches on a crown; or when the opening is shorter and more than slightly discolored or watersoaked; <u>Broccoli Florets</u> are **damaged** when the opening is slightly discolored or watersoaked.

Although rare, hollow stems could be considered **serious damage** if dark discoloration affected the hollow area within the opening greater than an inch in length in aggregate.

Insect Damage (Q or C)

Several types of insects and worms may cause insect damage. The most recognizable insect and the one that is most often found at destination is the aphid. The damage should be reported in accordance with the facts as either "insect damage" or "worm damage."

All three grades require that bunches and crowns not be damaged by insects which includes worms.

Scoring Guide

A <u>Broccoli Bunch or a Broccoli Crown</u> is considered **damaged** when more than 5 insects are present or when more than 1 worm is present. Also, when bunches or crowns show evidence of insect or worm feeding, score as **damage** when the affected area exceeds that of a circle 5/8 inch in diameter (aggregate area).

For <u>Broccoli Florets</u>, score as **damage** when 2 or more insects are present or more than 1 worm is present. Also, when florets show evidence of insect or worm

feeding, score as **damage** when the affected area exceeds that of a circle 1/4 inch in diameter (aggregate area).

In transit or at destination, if damage is fresh, or if live insect(s) or worm(s) are present or a combination of live and dead, report as a condition factor. Report as a quality factor when the damage is old or if the insect(s) or worm(s) are dead.

Maturity (C)

Maturity refers to the condition of the buds and bud clusters, color of the plant, and leaves. When not overmature, the bud clusters are closed although an occasional enlarged individual bud may be on the verge of opening. Overmature or open flower buds is the most frequent cause of complaint with broccoli at destination.

Scoring Guide

All three grades require that broccoli not be damaged by overmaturity.

§51.3564 *Damage.* (a) Overmaturity, when the appearance of the broccoli is materially affected by the presence of open flower buds, or buds which are enlarged and on the verge of opening.

When overmaturity is found as indicated in the preceding description it will be reported as "flowering bud clusters" or "enlarged bud clusters" whichever is applicable using the scoring guides below.

Flowering Bud Clusters

<u>Bunched Broccoli or Broccoli Crowns</u> are **damaged** by "flowering bud clusters" when more than 3 buds are *obviously* open. For <u>Broccoli Florets</u>, score as **damage** any amount of buds that are *obviously* opened.

Enlarged Buds

<u>Bunches</u> are **damaged** by enlarged buds if <u>all</u> the stalks in the bunch have most of their buds on the verge of opening. <u>Crowns and florets</u> are **damaged** by enlarged buds if the bunch or floret has most of their buds on the verge of opening.

Stem Texture (Q)

There are no requirements for stem or stalk texture for broccoli. However, lots of broccoli are occasionally encountered that have very fibrous stems and stalks. This quality factor is believed to be the result of adverse growing conditions.

Scoring Guide

This guide generally only applies to <u>Bunched Broccoli</u> as opposed to crowns and florets which would have been trimmed enough to remove the tough and woody

portions of the stem. Score stalks as **damage** by "tough and woody stems" when having a <u>definite woody texture</u> affecting more than 1 inch in length from the evenness of the cut at the base of the stalk above the lowest portion of trim. Score as **serious damage** when the affected portion is more than 3 inches in length.

Note: For broccoli packed in bunches, if only one stalk in the bunch were affected, the entire bunch would be considered damaged.

Trimming (Q)

Trimming refers to attached leaves and leaf stems that are longer than average length for the bunch or loose leaves and stems in the container; and the evenness of the cut at the base of the stalk.

The U.S. Standards for Grades of Italian Sprouting Broccoli have the following trimming requirements for bunches:

- U.S. Fancy: Closely trimmed, unless otherwise specified as "well trimmed."
- U.S. No. 1: Well trimmed, unless otherwise specified as "closely trimmed," "fairly well trimmed" or "leafy."
- U.S. No. 2: Fairly well trimmed, unless otherwise specified as "closely trimmed," "well trimmed" or "leafy."
- U.S. Fancy & U.S. No. 1 are also required to be "neatly and fairly evenly cut off at the base."

Bunched broccoli is considered to be "neatly and fairly evenly cut off at the base" if the butts are smoothly trimmed in a plane approximately parallel to the bottom of the container and the butts are not stringy or frayed.

Scoring Guide

§51.3567 Closely trimmed. "Closely trimmed" means that not more than a total of 5 percent, by weight, of the bunch consists of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3568 Well trimmed. "Well trimmed" means that not more than a total of 15 percent, by weight, of the bunch of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3569 Fairly well trimmed. "Fairly well trimmed" means that not more than a total of 30 percent, by weight, of the bunch consists of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3570 *Leafy.* "Leafy" means that more than 30 percent, but not more than 50 percent, by weight, of the bunch consists of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

Watersoaked Areas (C)

At times broccoli is encountered with watersoaked discolored areas, which is thought to be caused by heavy or long periods of rain. These affected areas often breakdown into decay; therefore, it is necessary to rub your fingers through the areas to see if they are mushy or disintegrate upon touch.

Scoring Guide

For <u>Bunched Broccoli and Broccoli Crowns</u>, score as **damage** when the affected area exceeds a circle 1/2 inch in diameter (aggregate area). Score as **serious damage** when the affected area exceeds a circle 1 inch in diameter (aggregate area).

For <u>Broccoli Florets</u>, score any amount of watersoaked areas as **damage**. Score as **serious damage** when the affected area exceeds 1/4 inch in diameter (aggregate area).

Decay (C)

All grades require that broccoli be free from decay; any amount is scored against the 2% tolerance.

The most common types affecting broccoli is Bacterial Soft Rot, Gray Mold Rot, and Watery Soft Rot. The type of decay is not to be reported on the certificate. However, when the decay is in excess of the tolerance report the degree of advancement as: early, moderate or advanced stages. Also, state whether it affects the bud clusters, leaves, stems, butts, or a combination thereof.

APPENDIX I: U.S. GRADE STANDARDS

United States Standards for Grades of Italian Sprouting Broccoli¹

Effective November 2, 2006

Grades

51.3555 U.S. Fancy.

51.3556 U.S. No. 1.

51.3557 U.S. No. 2.

Size Specifications

51.3558 Size specifications.

Tolerances

51.3559 Tolerances.

Application of Tolerances

51.3560 Application of Tolerances.

Definitions

51.3561 Fairly uniform.

51.3562 Stalk.

51.3563 Bunch.

51.3564 Damage.

51.3565 Compact.

51.3566 Fairly compact.

51.3567 Closely trimmed.

51.3568 Well trimmed.

51.3569 Fairly well trimmed.

51.3570 Leafy.

51.3571 Serious damage.

51.3572 Diameter.

51.3573 Length.

51.3574 Crowns or Crown cut.

51.3575 Florets or Florettes.

51.3576 Same type.

Grades

§51.3555 U.S. Fancy.

"U.S. Fancy" consists of Italian Sprouting Broccoli of the same type. The broccoli shall be free from decay, and from damage caused by overmaturity, discoloration of bud clusters or leaves, freezing, wilting, dirt or other foreign material, disease, insects, mechanical or other means. The bud clusters shall be generally compact. Bunched broccoli shall be neatly and fairly evenly cut off at the base, and closely trimmed unless otherwise specified as "well trimmed." (See §51.3559.)

For Bunched Broccoli. (a) The diameter of each stalk shall be not less than 2-1/2 inches. Unless otherwise specified, the length of each stalk shall be not less than 6 inches or more than 8-1/2 inches. **For Broccoli Crowns.** (b) The diameter of each crown shall be not less than 2-1/2 inches or more than 5 inches. Unless otherwise specified, the length of each stalk shall be not less than 2-1/2 inches or more than 5 inches.

For Broccoli Florets. (c) The diameter of each floret shall be not less than 3/4 inch or more than 3 inches. Unless otherwise specified, the length of each stem shall not be less than 1 inch or more than 3-1/2 inches.

§51.3556 U.S. No. 1.

"U.S. No. 1" consists of Italian Sprouting Broccoli of the same type. The broccoli shall be free from decay, and from damage caused by overmaturity, discoloration of bud clusters or leaves, freezing, wilting, dirt or

¹Compliance 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.

other foreign material, disease, insects, mechanical or other means. The bud clusters shall be generally fairly compact. The bunched broccoli shall be neatly and fairly evenly cut off at the base, and well trimmed, unless otherwise specified as "closely trimmed," "fairly well trimmed," or "leafy." (See §51.3559.) For Bunched Broccoli. (a) There are no requirements for diameter but diameter may be specified for any lot as set forth in §51.3558. Unless otherwise specified, the length of each stalk shall be not less than 5 inches or more than 9 inches.

For Broccoli Crowns. (b) There are no requirements for diameter but diameter may be specified for any lot as set forth in §51.3558. Unless otherwise specified, the length of each crown shall be not less than 3-1/2 inches or more than 6 inches.

For Broccoli Florets. (c) The diameter of each floret shall be not less than 1 inch or more than 4 inches. Unless otherwise specified, the length of each floret shall not be less than 1-1/2 inch or more than 4-1/2 inches.

§51.3557 U.S. No. 2.

"U.S. No. 2" consists of Italian Sprouting Broccoli of the same type. The broccoli shall be free from decay, and from damage caused by overmaturity, insects, and from serious damage caused by discoloration of bud clusters or leaves, freezing, wilting, dirt or other foreign material, disease, or mechanical or other means. The bunched broccoli shall be fairly well trimmed unless otherwise specified as "closely trimmed," or "well trimmed," or "leafy." (See §51.3559.)

For Bunched Broccoli. (a) There are no requirements for diameter or length, but size may be specified for any lot in connection with the grade, as set forth in §51.3558.

For Broccoli Crowns. (b) There are no requirements for diameter or length, but size may be specified for any lot in connection with the grade, as set forth in §51.3558.

For Broccoli Florets. (c) There are no requirements for diameter or length, but size may be specified for any lot in connection with the grade, as set forth in §51.3558.

Size Specifications

§51.3558 Size specifications.

For Bunched Broccoli. (a) **Diameter.** The terms "heads" and "shoots" may be used to designate size of stalks in connection with U.S. No. 1 and U.S. No. 2 grades. If heads and shoots are mixed, the percentage, by weight, of heads contained in the lot may be specified.

- (1) The minimum or maximum diameter, or both, in terms of inches and quarter inches, in the U.S. No. 1 and U.S. No. 2 grades, may be specified for the lot as a whole or for a certain percentage, by weight or by count (when fairly uniform), of the lot; for example: "2 inches minimum," or "50 percent 3-1/4 inches or larger," or "75 percent 2-1/2 inches or larger."
- (b) **Length.** The minimum or maximum length, or both, in terms of inches or half inches, may be specified for all grades in connection with the grade in accordance with the facts: for example, "7 inches minimum length," or "6-1/2 to 8-1/2 inches long."

For Broccoli Crowns. (a) **Diameter.** (1) For U.S. No. 1 and U.S. No. 2 grades, the minimum or maximum diameter, or both, in terms of inches and quarter inches, may be specified for the lot as a whole or for a certain percentage, by weight or count (when fairly uniform), of the lot.

(b) **Length.** The minimum or maximum length, or both, in terms of inches or half inches, may be specified for all grades in connection with the grade in accordance with the facts.

For Broccoli Florets. (a) **Diameter.** (1) For the U.S. No. 2 grade, the minimum or maximum diameter, or both, in terms of inches and quarter inches, may be specified for the lot as a whole or for a certain percentage, by weight or count (when fairly uniform), of the lot.

(b) **Length.** The minimum or maximum length, or both, in terms of inches or half inches, may be specified for all grades in connection with the grade in accordance with the facts.

Tolerances

§51.3559 Tolerances.

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

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

(1) Percentages shall be determined on the basis of count, except that when bunches are not fairly uniform in size, percentages shall be determined on the basis of weight.

- (b) **For size.** (1) Ten percent, percentages shall be determined on the basis of count, except that when bunches are not fairly uniform in size, percentages shall be determined on the basis of weight, for stalks in any lot which fail to meet the size requirements of the specified grade or any sizes specified for length and diameter.
- (2) When a percentage of the broccoli in a lot is specified to be "heads" or of a certain diameter and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole; but individual containers may have not more than 15 percentage points less than the percentage specified: **Provided**, That the entire lot averages within the percentage specified.

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

- (1) Percentages shall be determined on the basis of count, except that when crowns are not fairly uniform in size, percentages shall be determined on the basis of weight.
- (b) **For size.** (1) Ten percent, percentages shall be determined on the basis of count, except when crowns are not fairly uniform in size, percentages shall be determined on the basis of weight, for crowns in any lot which fail to meet the size requirements of the specified grade or any sizes specified for length and diameter.
- (2) When a percentage of the broccoli in a lot is specified as a certain diameter and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole; but individual containers may have not more than 15 percentage points less than the percentage specified: **Provided**, That the entire lot averages within the percentage specified.

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

- (1) Percentages shall be determined on the basis of count, except that when florets are not fairly uniform in size, percentages shall be determined on the basis of weight.
- (b) **For size.** (1) Ten percent, percentages shall be determined on the basis of count, except when florets are not fairly uniform in size, percentages shall be determined on the basis of weight, for florets in any lot which fail to meet the size requirements of the specified grade or any sizes specified for length and diameter.
- (2) When a percentage of the broccoli florets in a lot is specified to be of a certain diameter and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole; but individual containers may have not more than 15 percentage points less than the percentage specified: **Provided**, That the entire lot averages within the percentage specified.

Application of Tolerances

§51.3560 Application of tolerances.

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

For Bunched Broccoli. (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 bunches or less, individual packages may contain not more than double the tolerance specified: Provided, That the averages for the entire lot are within the tolerances 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 bunch which does not meet the requirements shall be allowed in any one package. And provided further, That the averages for the entire lot are within the tolerances specified for the grade.

For Broccoli Crowns. (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 when the package contains 15 crowns or less, individual packages may contain not more than double the tolerance specified:

Provided, That the averages for the entire lot are within the tolerances 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 crown which does not meet the requirements shall be allowed in any one package. **And provided further**, That the averages for the entire lot are within the tolerances specified for the grade.

For Broccoli Florets. (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 when the package contains

3 pounds or less, individual packages may contain not more than double the tolerance specified:

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

Definitions

§51.3561 Fairly uniform.

"Fairly uniform" means: (a) **For bunched broccoli:** Bunches are considered fairly uniform if the diameter of the bunches within the container do not vary more than three inches.

- (b) **For broccoli crowns:** Crowns are considered to be fairly uniform if the diameter of the crowns within the container do not vary more than three inches.
- (c) **For broccoli florets:** Florets are considered fairly uniform if the diameter of the florets within the sample do not vary more than 1-1/2 inches.

§51.3562 Stalk.

"Stalk" means a portion of the broccoli plant including the stem, bud clusters and leaves. Individual stalks may be designated as "heads" or "shoots" as follows:

- (a) "Head" means a stalk of broccoli having a cluster of closely associated buds which is 2-1/4 inches or larger in diameter.
- (b) "Shoot" means a stalk of broccoli having bud clusters which fail to meet the requirements for a head. **§51.3563 Bunch.**

"Bunch" means stalks bound together to form a unit. A single stalk may be considered a bunch if it is approximately as large as other bunches in the lot.

§51.3564 Damage.

"Damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the broccoli. The following specific defects shall be considered as damage:

- (a) Overmaturity, when the appearance of the broccoli is materially affected by the presence of open flower buds, or buds which are enlarged and on the verge of opening.
- (b) Discoloration of bud clusters, when the appearance of the broccoli is materially affected by buds which have a noticeably yellowish, brownish, or reddish cast in contrast to the desirable good green color. A bluish or purplish cast over the green is often characteristic of good broccoli and shall not be considered as damage.
- (c) Discoloration of leaves, when the appearance of the broccoli is materially affected by discolored leaves or parts of leaves.

§51.3565 Compact.

"Compact" means that the individual buds in the bud cluster are generally small and tightly crowded together, and that the bud clusters on the stalk are generally close together and feel fairly firm and moderately resistant to pressure.

§51.3566 Fairly compact.

"Fairly compact" means that the individual buds and bud clusters on the stalk are generally close together so that the top of the clusters do not have a ragged appearance or feel very soft.

§51.3567 Closely trimmed.

"Closely trimmed" means that not more than a total of 5 percent, by weight, of the bunch consists of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3568 Well trimmed.

"Well trimmed" means that not more than a total of 15 percent, by weight, of the bunch of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3569 Fairly well trimmed.

"Fairly well trimmed" means that not more than a total of 30 percent, by weight, of the bunch consists of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3570 Leafy.

"Leafy" means that more than 30 percent, but not more than 50 percent, by weight, of the bunch consists of attached stems and leaves that are longer than the average length of the bunch, regardless of point of attachment, or loose leaves and stems.

§51.3571 Serious damage.

"Serious damage" means any specific defect described in this section; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance or the edible or marketing quality of the broccoli. The following specific defects shall be considered as serious damage:

- (a) Discoloration of bud clusters, when the buds have a decidedly yellowish, brownish, or reddish cast which seriously detracts from the appearance of the broccoli. A bluish or purplish cast over the green is often characteristic of good broccoli and shall not be considered as serious damage.
- (b) Discoloration of leaves, when the appearance of the broccoli is seriously affected by discolored leaves or parts of leaves.

§51.3572 Diameter.

"Diameter" means the average measurement across the bud cluster at the top of the stalk, crown, or floret.

§51.3573 Length.

"Length" means the total length of the stalk measured from the base of the stem to the top of the bud cluster.

§51.3574 Crowns or Crown Cuts.

"Crowns" mean the main stem is cut back from a portion of the broccoli plant including the stems which are of lengths according to the grade applied, bud clusters, and leaves.

§51.3575 Florets or Florettes.

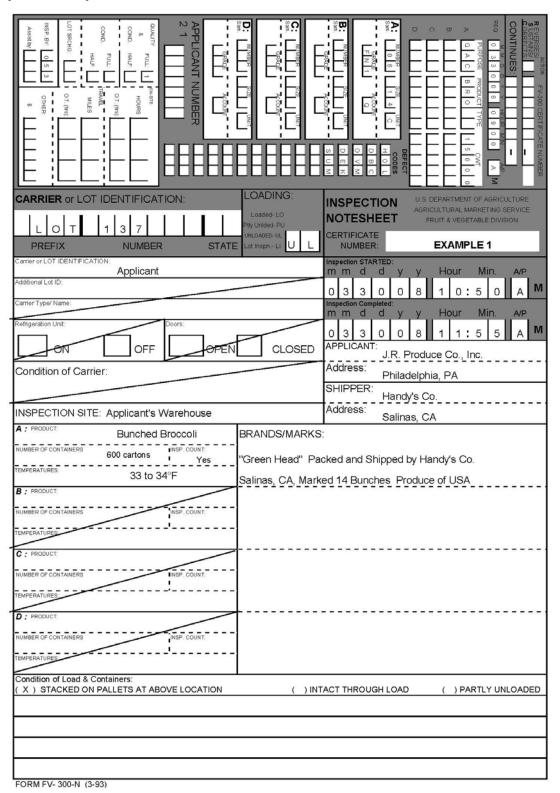
"Florets" or "Florettes" mean the main stem is cut back considerably and only a single smaller secondary stem remains with the bud cluster. Florets are bud clusters or pieces of the bud cluster that have been closely trimmed from the head.

§51.3576 Same type.

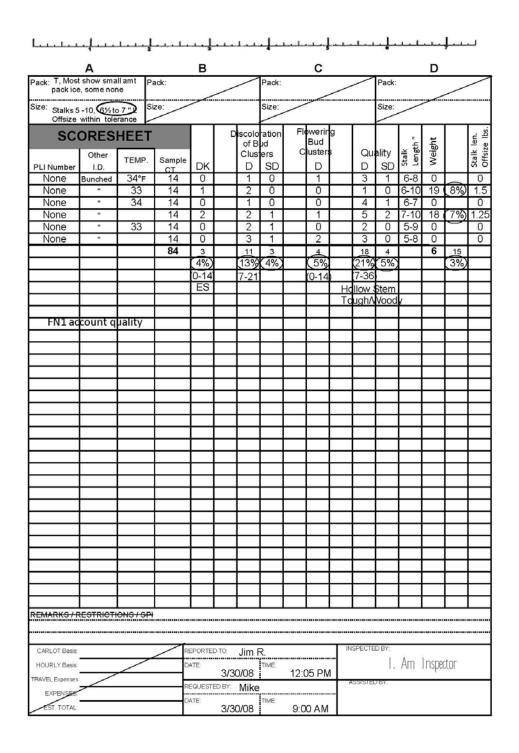
"Same type" means lots shall consist of broccoli with similar type characteristics, i.e., bunched can not be mixed with florets.

Appendix II: Examples

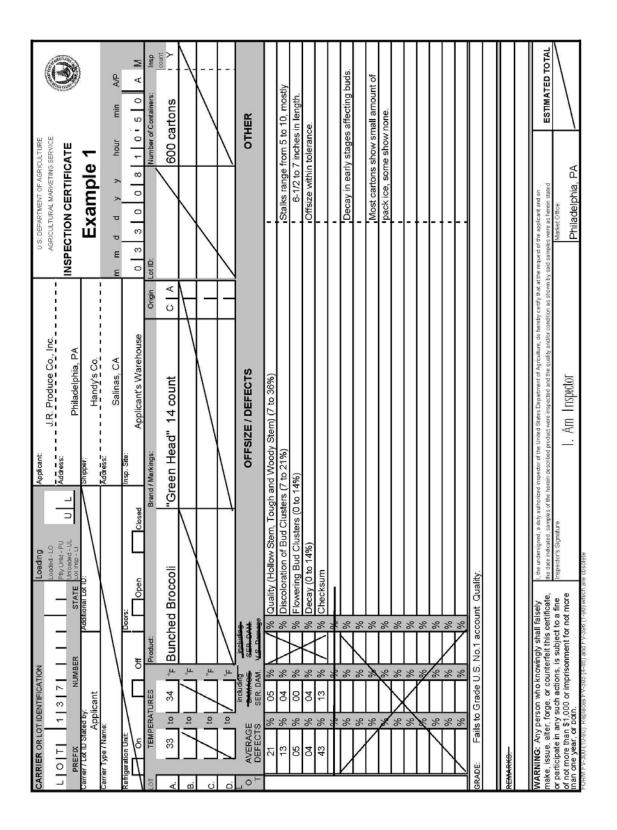
Example 1 - Inspection Notesheet



Example 1 – Inspection Scoresheet



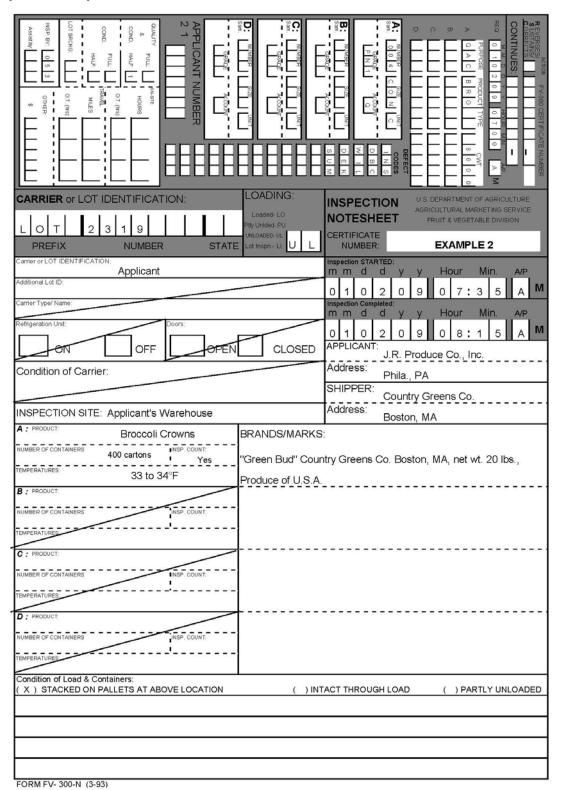
Example 1 - Written FV 300 Certificate



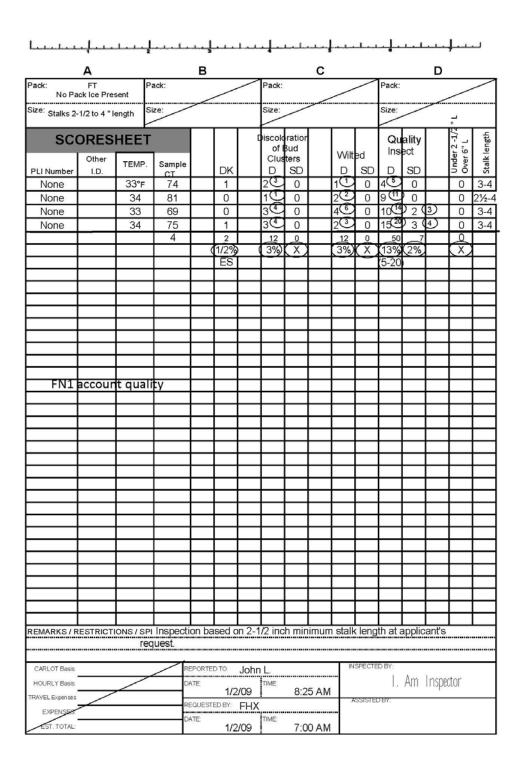
Example 1 – FEIRS FV 300 Certificate

	or LOT ID:	LOT 13	37	APPLICANT: (00000	0000) J.R. PRODUCE	REQUESTED:	3/30/2008	9:00 AM
LOADING	STATUS:	UNLOADED		PHILADELPHIA, PA		STARTED:	3/30/2008	10:50 AM
STATED B	Y: APPLIC	CANT		SHIPPER: HANDY'S	co.	COMPLETED:	3/30/2008	11:55 AM
ADDITION	AL ID: NA			SALINAS, CA		PASSWORD F	OR ONLINE	ACCESS
CARRIER	TYPE:NA			MARKET OFFICE: P	HILADELPHIA, PA			
REFRIG U	NIT: NA	DO	ORS: NA	INSP SITE: APPLICA	NT'S WAREHOUSE	ESTIMATED FE	E NO C	HARGE
REMARKS	t:							
			10	T A (QAC) - BROCCOLI	LITALIAN CDDOUTIN	16		
TEMP: 3	33° to 34°F	INSP CT:	0.0000000	UMBER OF CONTAINERS: 800		us).	OR	IGIN: CA
MARKING): GREEN HE	EAD	ACKED AND SHIPPED BY: HAI		MARKED 14 BUNCHE	S. PRODU	DE OF
PLI: NONI	E			0.	THER ID: BUNCHED			
INJURY	DAM	SER DAM	V.S. DAM		OFFSIZE/DEFE	стѕ		
NA	21	5	NA	QUALITY DEFECTS (7 to 36%	6)(HOLLOW STEMS,TOUG	H AND WOODY STEM	IS)	
NA	13	4	NA	DISCOLORED BUD CLUSTE	RS (7 to 21%)			
NA	5	0	NA	FLOWERING BUD CLUSTER				
NA	4	4	NA	DECAY OF BUD CLUSTERS	(0 to 14%)			
NA BRADE:	43	13	NA NA	CHECKSUM				
OT DESC	LENGT STAGE	H: OF STALP S OF DECAY	(S 5 TO 10 I (BUD CLU	COUNT QUALITY. NCHES, MOSTLY 6 TO 7-1/2 I STERS): EARLY JNT PACK ICE, SOME NONE	NCHES. OFFSIZE WITHIN	TOLERANCE.		
OT DESC	LENGT STAGE	H: OF STALP S OF DECAY	(S 5 TO 10 I (BUD CLU	NCHES, MOSTLY 6 TO 7-1/2 I STERS): EARLY	NCHES OFFSIZE WITHIN	TOLERANCE.		_

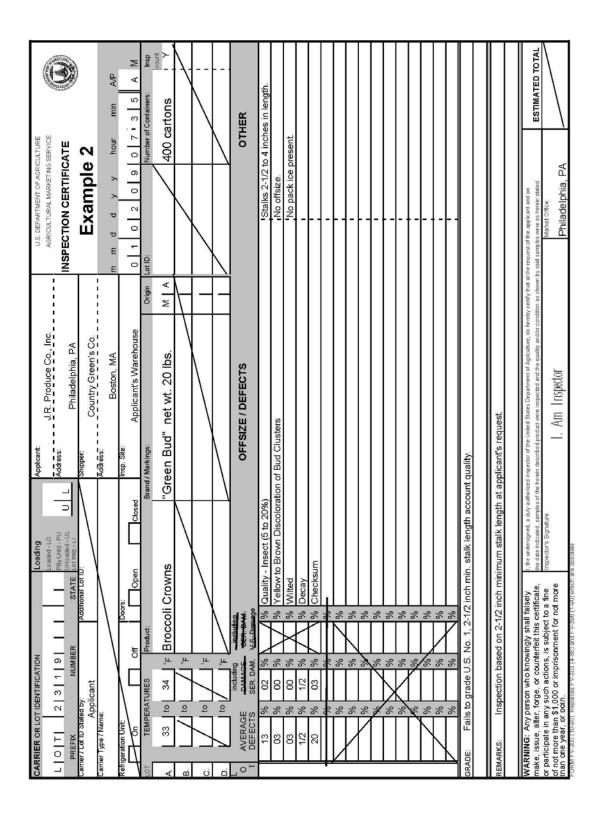
Example 2 – Inspection Notesheet



Example 2 – Inspection Scoresheet



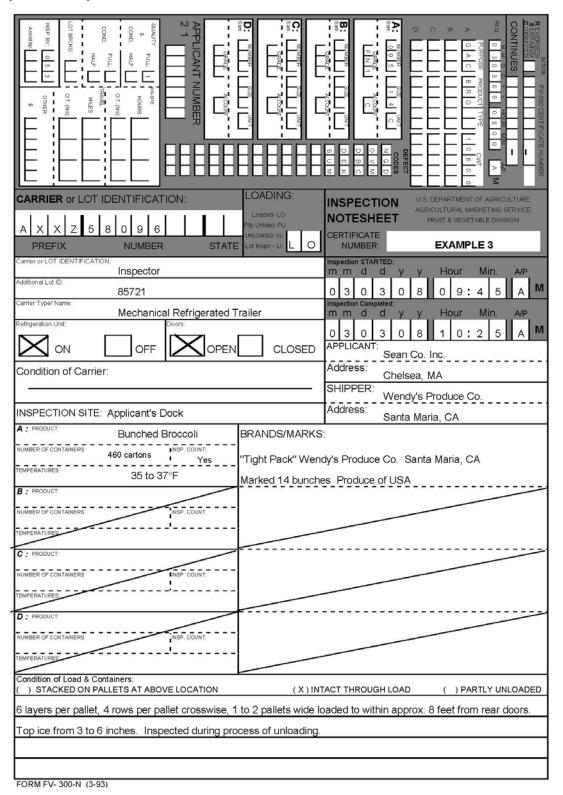
Example 2 - Written FV 300 Certificate



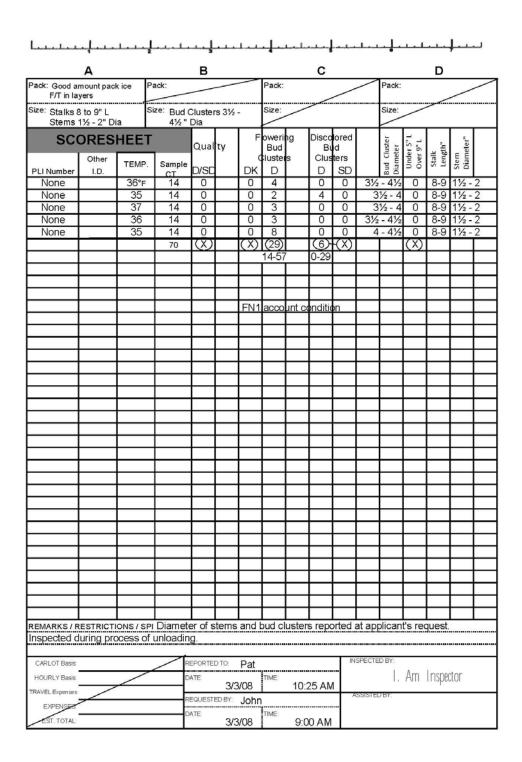
Example 2 – FEIRS FV 300 Certificate

VULVIER	or LOT ID:	*	319	ions.ams.usda.gov	INNOUND I P PRODUCE	PAGE	EQUESTED:	1/2/2000	7:00 AM		
CARRIER or LOT ID: LOT 2319 LOADING STATUS: UNLOADED			310	PHILADELPHIA, P	APPLICANT: (000000000) J.R. PRODUCE		TARTED:	1/2/2009	7:35 AM		
20100000000000000000000000000000000000	BY: APPLIC				SHIPPER: COUNTRY GREEN'S CO.		OMPLETED:	MIESTON 50	8:15 AN		
	IAL ID: NA	26.114.1		BOSTON, MA	The state of the s						
CARRIER	TYPE:NA			MARKET OFFICE	MARKET OFFICE: PHILADELPHIA, PA			PASSWORD FOR ONLINE ACCES			
REFRIG UNIT: NA DOORS: NA			ODS: NA	TANGET TANGET TO A	INSP SITE: APPLICANT'S WAREHOUSE			EE: NO	CHARG		
REMARKS:			70K3. NA								
	1,										
	-14/34/1				OCCOLI, ITALIAN SP	ROUTIN	G				
	33° to 34°F	INSP CT:	0 80	IUMBER OF CONTAINERS:	400 CARTON(S)			C	RIGIN: MA		
MARKING	SS: BRAND): GREEN BI	JD						įs.		
	1.72.74	NGS: COUN	TRY GREEN	NS CO. BOSTON, MA., MAF			USA.				
PLI: NON	200				OTHER ID: BROCCOLI CR	1967 DEM DEM (464)					
INJURY	DAM	The second second	V.S. DAM		OFFSIZE/DEF	ECTS					
NA	13	2	NA	QUALITY DEFECTS (5 to 2							
NA NA	3	0	NA NA	DISCOLORATION OF BUE WILTED (1 to 6%)	J CLUSTERS (1 to 4%)						
NA NA	0.5	0.5	NA NA	DECAY (0 to 1%)							
NA	20	3	NA NA	CHECKSUM							
	STAGES ICE: PA INSPEC	S OF DECAY CK ICE: NO TION BASEI	: EARLY PACK ICE D ON 2-1/2 I	4 INCHES. NO OFFSIZE. NCH MINIMUM STALK LEN: STERS: YELLOW TO BROV		UEST.			£2		
	STAGES ICE: PA INSPEC	S OF DECAY CK ICE: NO TION BASEI	: EARLY PACK ICE D ON 2-1/2 I	NCH MINIMUM STALK LEN		UEST.			,		

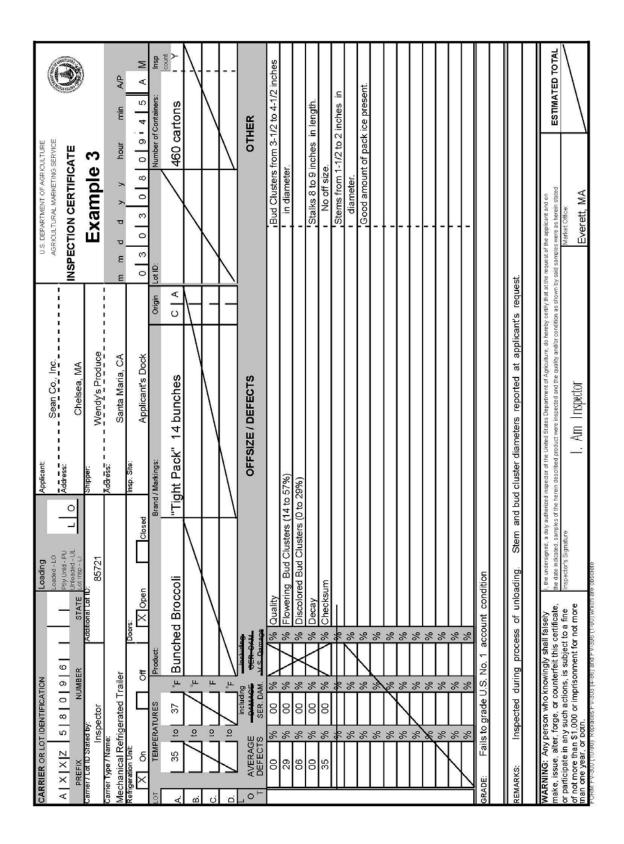
Example 3 – Inspection Notesheet



Example 3 - Inspection Scoresheet



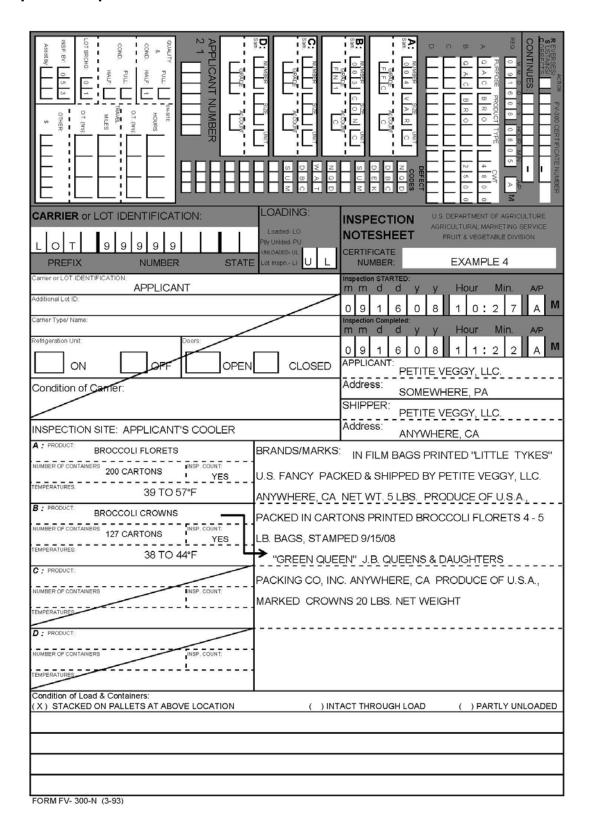
Example 3 - Written FV 300 Certificate



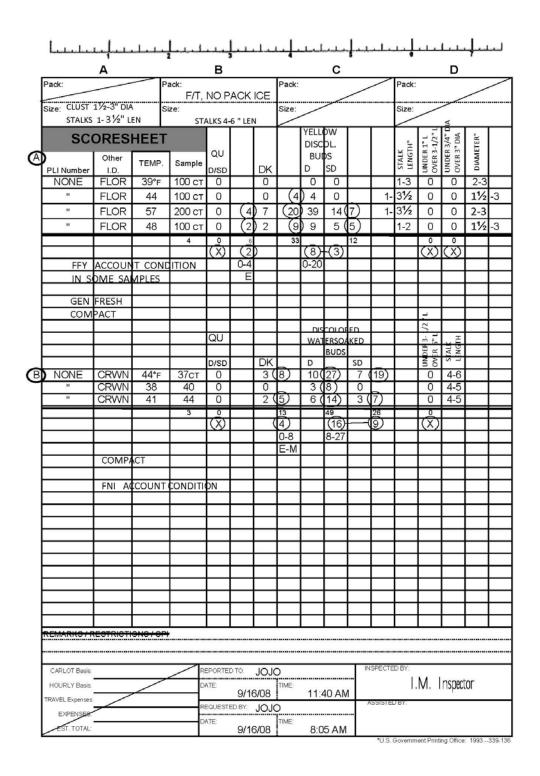
Example 3 – FEIRS FV 300 Certificate

	or LOT ID:		1096	ions.ams.usda.gov		PAGE 1 of 1 REQUESTED:	3/3/2000	9:00 AM		
	STATUS:			CHELSEA, MA	APPLICANT: (000000000) SEAN CO. INC.		3/3/2008	9:45 AM		
STATED B	200 0000 000000 20 1 20 0	ECTOR		SHIPPER: WENDY'S PRO	DUCE	STARTED:	74.00.0048040404	10:25 AN		
	AL ID: 8572			SANTA MARIA, CA	advanta e de aporte de la constante de la cons			PASSWORD FOR ONLINE ACCESS		
CARRIER	TYPF:MECH	HANICAL REFI	RIGERATED	MARKET OFFICE: EVER	ETT MA	FASSWORD	FOR ONLIN	E ACCES		
REFRIG U			ORS: OPE		SCOOL ARTHUR SCOTT	ESTIMATED F	FEE: NO	CHARGE		
		1, 57,00	HIS KIND OF THE PARTY.	OF UNLOADING:				TO STATE		
20110		20.00	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	on oncombino.						
			LO	TA (QAC) - BROCCOLI, IT	ALIAN SPROUTII	NG				
гемр: 3	35° to 37°F	INSP CT:	YES N	UMBER OF CONTAINERS: 460 CA	RTON(S)		OI	RIGIN: CA		
MARKING		TIGHT PAC		NDY'S PRODUCE. SANTA MARIA	CA MARKED 14 RI	INCHES PRODUCE	OFTISA	10		
PLI: NONE		105.110111	TACK: WE	OTHEI	Tit.	NCHES: I NOBOCE	OI OOA.			
INJURY	DAM	SER DAM	VSDAM		OFFSIZE/DEFE	CTS				
NA	0	0	NA NA	QUALITY DEFECTS	OF T SIZE/BETE	513				
NA NA	29	0	NA NA	FLOWERING BUD CLUSTERS (C	PEN) (14 to 57%)					
NA	6	0	NA	DISCOLORED BUD CLUSTERS (AND CONTRACTOR OF CONTRACTOR O					
NA	0	0	NA	DECAY	8					
NA	35	0	NA	CHECKSUM						
RADE:	FAILS TO	O GRADE U.	S. NO. 1 AC	COUNT CONDITION.						
OT DESC	DIAMET PACK IC STEMS:	ER: OF BUD E: GOOD AM 1-1/2 TO 2 I	CLUSTER: MOUNT OF NCHES IN		NT'S REQUEST			\v		
	DIAMET PACK IC STEMS:	ER: OF BUD E: GOOD AM 1-1/2 TO 2 I	CLUSTER: MOUNT OF NCHES IN	S 3-1/2 TO 4-1/2 INCHES PACK ICE DIAMETER	NT'S REQUEST					

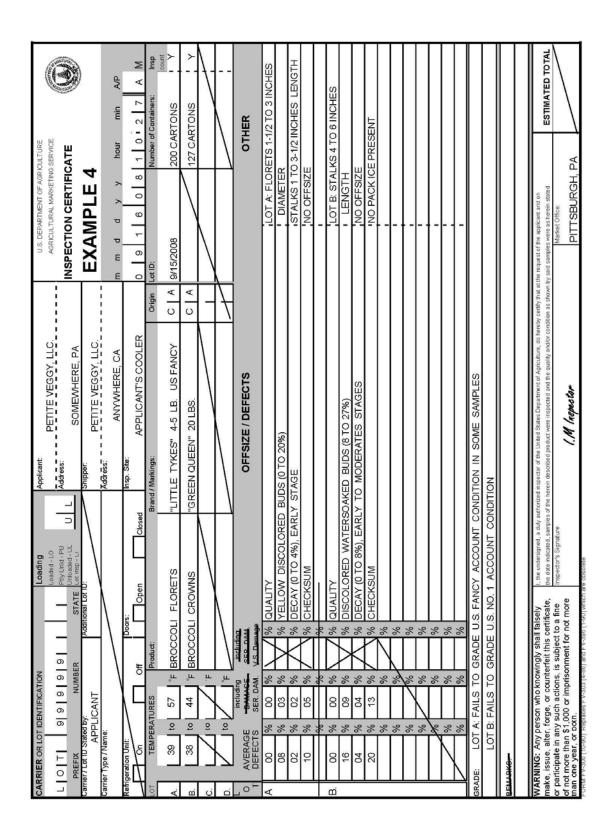
Example 4 - Inspection Notesheet



Example 4 – Inspection Scoresheet



Example 4 - Written FV 300 Certificate



Example 4 – FEIRS FV 300 Certificate: Page 1 of 2

		GRICULT	TURAL M	ARKETING SERVICE	INSPECTION CERTIF	
				ons.ams.usda.gov		PAGE 1 of 2
CARRIER	or LOT ID: L	_OT 99	9999		100000) PETITE VEGGY, LLC	REQUESTED: 9/16/2008 8:05 AM
LOADING	STATUS: U	NLOADED		SOMEWHERE, PA		STARTED: 9/16/2008 10:27 AM
STATED B	Y: APPLICA	ANT		SHIPPER: (0000000	100) PETITE VEGGY, LLC.	COMPLETED: 9/16/2008 11:22 AM
ADDITION	AL ID: NA			ANYWHERE, CA		PASSWORD FOR ONLINE ACCES
CARRIER	TYPE:NA			MARKET OFFICE:	PITTSBURGH, PA	
REFRIG UI	NIT: NA	DO	ORS: NA	INSP SITE: APPLIC	ANT'S COOLER	ESTIMATED FEE: NO CHARGE
REMARKS	Section 1		252 ASSESSES (1974)	ı		
			LO	T A (QAC) - BROCCOI	I, ITALIAN SPROUTIN	l G
TEMP: 3	19° to 57°F	INSP CT:	YES N	UMBER OF CONTAINERS:2	00 CARTON(S)	ORIGIN: CA
MARKING	BRAND:	LITTLE TY	KES			
						GGIE, LLC. ANYWHERE, CA NET WT. I - 5 LB. BAGS, STAMPED 9/15/08
PLI: NONE	1				OTHER ID: BROCCOLI FLORI	ETS
INJURY	DAM	SER DAM	V.S. DAM	**	OFFSIZE/DEFEC	CTS
NA	0	0	NA	QUALITY DEFECTS		
NA	8	3	NA	YELLOW DISCOLORED BU	DS (0 to 20%)	
NA	2	2	NA	DECAY OF BUD CLUSTERS		
NA	10	5	NA	CHECKSUM	2082002 0258	
SRADE:		Section 1997		ACCOUNT CONDITION IN SC	ME SAMPLES	

Example 4 – FEIRS FV 300 Certificate: Page 2 of 2

USD	- CONTROL CO.	GRICULI	TURAL N	T OF AGRICULTURE //ARKETING SERVICE tions.ams.usda.gov	INSPECTION CERTIFIC	ATE EXAM	IPLE 4
CARRIER	or LOT ID:	27	3999		000000) PETITE VEGGY, LLC.		9/16/2008 8:05 AM
	STATUS: U			SOMEWHERE, PA	, , , , , , , , , , , , , , , , , , ,		3/16/2008 10:27 AM
	Y: APPLICA	200 00000000000000000000000000000000000			000) PETITE VEGGY, LLC.	COMPLETED:	ATEC TO A SERVICE SERVICE TO SERVICE S
ADDITION		50.0		ANYWHERE, CA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
				23	DITTODUDOU DA	PASSWORD F	OR ONLINE ACCESS
CARRIER				MARKET OFFICE:	and probability desired as Child Walter Profession		
REFRIG UI	I STATE OF THE STA	DO	ORS: NA	INSP SITE: APPLIC	ANT'S COOLER	ESTIMATED FE	E: SEE PAGE 1
REMARKS	•						
			L	OT B (QAC) - BROCCOL	LI, ITALIAN SPROUTING		
TEMP: 3	38° to 44°F	INSP CT:	YES	NUMBER OF CONTAINERS: 13	27 CARTON(S)		ORIGIN: CA
MARKING	S: BRAND:	GREEN QU	JEEN				,
	20 LBS.	IGS: J.B. QI NET WEIGI		DAUGHTERS PACKING CO, IN	NC.ANYWHERE, CA PRODUCI	EOFU.S.A., MAR	(ED CROWNS
PLI: NONE	100 0 70 70 70 70 70				OTHER ID: BROCCOLI CROWNS		
INJURY	DAM	SER DAM	V.S. DAM		OFFSIZE/DEFECTS		
NA	0	0	NA	QUALITY DEFECTS			
NA	16	9	NA	DISCOLORED WATERSOA			
NA	4	4	NA	DECAY OF BUD CLUSTERS	S (0 to 8%)		
NA	20	13	NA	CHECKSUM			