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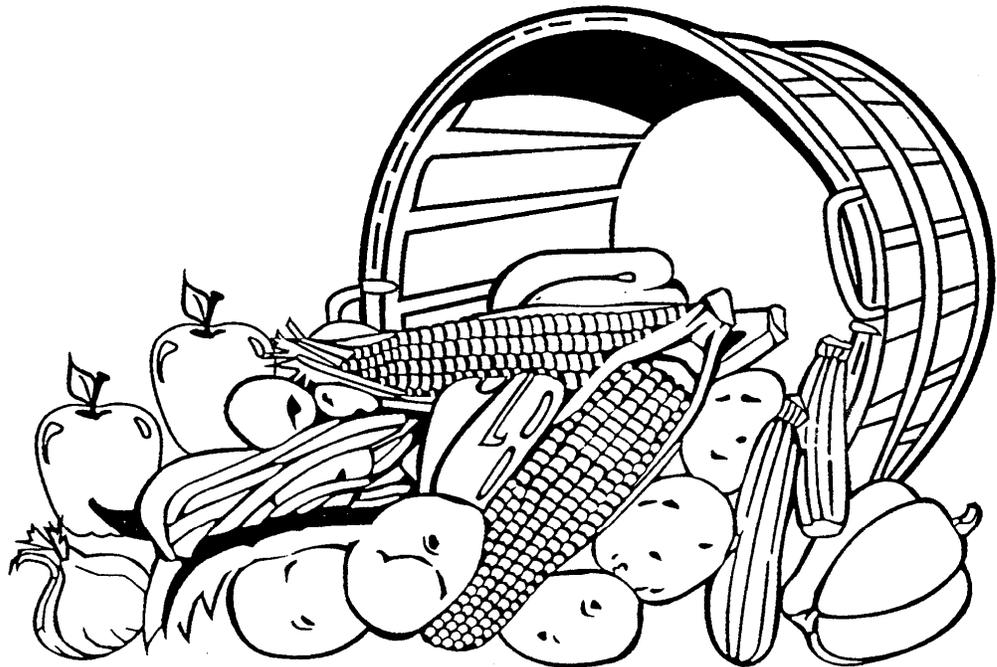
Fruit and  
Vegetable  
Programs

Fresh Products  
Branch

January 2008

# Asparagus

## Shipping Point and Market Inspection Instructions



# Shipping Point and Market Inspection Instructions for Asparagus

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 Asparagus, Section 51.3720.

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. that is not covered in these instructions. Reference to "General Inspection Instructions" in all Fresh Product Branch publications refers to any of 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 is material copied directly from the U.S. standards. The U.S. Standards for Grades of Asparagus are printed in the appendix of this handbook. All of the U.S. standards are available on the Internet under the USDA homepage.

**January 2008**

*This replaces Shipping Point and Market Inspection Instructions for Asparagus dated January 1972.*

**This publication may be duplicated without authorization from USDA.**

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**

In the United States most of the asparagus crop is grown in California, Washington, and Michigan. Peru is the leading importer of asparagus into the U.S. followed by China and Mexico. Peru is also the world's leading asparagus exporter.

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## **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.

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## **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. Additional information and instructions may be given by your supervisor.

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### **Product**

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

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### **Number/Type of Containers**

The number of containers shall always be reported. In the market and at shipping point locations for stationary lot certification, the inspector shall 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 on someone else's authority. However, the reason for doing so must be reported on the notesheet (e.g., numerous pallets with mixed product).

Asparagus is shipped in pyramid asparagus crates, cartons, non-tapered wood crates, foam containers, and consumer size trays. There is usually a moisture pad in the bottom of each container.

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.

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### **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.

At shipping point, the brand, size, PLI and other important information appearing on the container shall be reported on the notesheet and certificate in the appropriate section.

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### **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. This policy is necessary because some firms may use one mark on the same product packed in several States.

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## **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. Remember to pre-cool the thermometer in order to obtain true readings. 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. The location in the lot and/or load must be specified in greater detail when additional temperatures are taken (i.e., heated or frozen load).

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## CONDITION OF PACK

The following terms should be used to describe pack:

**Very Tight:** The pack is extremely tight and may result in injury to the product.

**Tight:** Describes a container that is sufficiently filled to prevent the product from moving in the container but not overly filled so that injury to the product results.

**Fairly Tight:** Describes a container that is not so desirably filled as described for "tight." There may be slight movement of individual stalks in the container.

**Slack or Loose:** Describes when the contents can move within the container. If the pack is loose it is important to quote the net weight marked on the package. When reported as "Slack" the degree of slackness should be reported in inches and fractions thereof.

When requested by the applicant, report the presence of material used, (i.e., moisture pads in the bottom of containers). State whether they are wet or dry.

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## Number 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 three (3) samples must be examined. When the asparagus are in consumer packages packed in master containers, the sample rate shall be doubled to a minimum of six consumer units taken from different master containers. 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.

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## Size of Sample

The tolerances in the U.S. Standards for Grades of Asparagus are determined on the basis of count.

The sample to be examined shall consist of a minimum of 50 stalks taken proportionately from the side to the center of the container. If the application of tolerances for the sample is exceeded, double the sample size to 100 stalks or sample the entire container in at least one sample. When consumer packages are encountered, the entire package is the sample. Bunched asparagus is not considered a consumer unit solely by being bunched. Consumer units are sold on a per container basis, with a set price. Consumer units generally are marked with a brand and specific weight.

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# TOLERANCES AND APPLICATION OF TOLERANCES

§51.3720 *U.S. No. 1... (c) Tolerances.* In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) *For defects.* 10 percent for stalks in any lot which fail to meet the requirements of this grade other than for trimming, including therein not more than 5 percent for defects causing serious damage: Provided, That not more than one-fifth of this latter amount, or 1 percent, shall be allowed for stalks affected by decay. In addition, not more than 10 percent of the stalks in any lot may fail to meet the trimming requirement.

(2) *For off size.* 10 percent for stalks in any lot, which fails to meet the specified diameter or length requirements.

§51.3721 *U.S. No. 2. (c) Tolerances.* In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) *For defects.* 10 percent for stalks in any lot which fail to meet the requirements of this grade other than for trimming, including therein not more than one-tenth of this tolerance, or 1 percent, shall be allowed for stalks affected by decay. In addition, not more than 10 percent of the stalks in any lot may fail to meet the trimming requirement.

(2) *For off size.* 10 percent for stalks in any lot which fail to meet the specified diameter or length requirements.

	<u>U.S. No. 1</u>	<u>U.S. No. 2</u>
Total Defects	10%	10%
Serious Damage	5%	(All SD)
Decay	1%	1%
Trimming ( <b>additional tolerance not to be included with the total defects</b> )	10%	10%
Offsize	10%	10%

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## Application of Tolerances

### §51.3722 Application of tolerances.

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

(a) Packages which contain more than 50 stalks shall have not more than 1-1/2 times a specified tolerance of 10 percent or more, or not more than double a specified tolerance of less than 10 percent: Provided, That the averages for the entire lot are within the tolerances specified for the grade.

(b) Packages which contain 50 stalks or less shall have not more than 4 times the tolerance specified, except that at least 2 defective and 2 off size stalks may be permitted in any package: Provided, That not more than 1 stalk which is affected by decay may be permitted in any package: And provided further, That the averages for the entire lot are within the tolerances specified for the grade.

	<u>U.S. No. 1</u>		<u>U.S. No. 2</u>	
	<i>More than 50 stalks</i>	<i>50 stalks or less</i>	<i>More than 50 stalks</i>	<i>50 stalks or less</i>
Total Defects	10% x 1.5=15%	10% x 4=40%	10% x 1.5=15%	10% x 4=40%
Serious Damage	5% x 2=10%	5% x 4=20%		
Decay	1% x 2=2%	Not more than 1 stalk per pkg.	1% x 2=2%	Not more than 1 stalk per pkg.
Trimming ( <b>additional tolerance not to be included with the total defects</b> )	10% x 1.5=15%	10% x 4=40%	10% x 1.5=15%	10% x 4=40%
Off-Size	10% x 1.5=15%	10% x 4=40%	10% x 1.5=15%	10% x 4=40%

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## SIZE

### Diameter:

The diameter of stalks shall be measured at a point approximately one inch from the butt when on the basis of the U.S. Standards.

For all imports and/or unless otherwise specified, the minimum diameter for each grade shall be as follows:

U.S. No. 1	One half (1/2) inch.
U.S. No. 2	Five sixteenths (5/16) inch.

When the size is specified (other than 1/2 inch or 5/16 inch respectively), the specified size must be included in the grade statement.

**Length:**

**§51.3725 Stalk length.** There is no minimum stalk length specified in the grades but the minimum stalk length may be stated in terms of whole inches or whole and half inches in connection with the grade designation as "U.S. No. 1, 8-1/2-inch minimum," "U.S. No. 1 Large, 7-inch minimum," "U.S. No. 1 Large, 10-1/2-inch minimum," etc., in accordance with the facts.

*Note: If the inspection is based upon a specific stalk length, all stalks shorter than the specified length shall be scored against the tolerance for off-size.*

**Size Classifications**

The following terms are provided to describe stalk diameter based on the U.S. Standards.

Very Small	Less than 5/16 inch
Small	5/16 to less than 8/16 inch
Medium	8/16 to less than 11/16 inch
Large	11/16 to less than 14/16 inch
Very Large	14/16 inch and up

The following size classifications for diameter are provided for asparagus from a specific growing area (CA & WA respectively).

**California**

**All sizes are based on the diameter of the stalk at the widest point of the stalk cross section.** California asparagus is based on the size classifications in the California Agricultural Code. Shipments from Mexico are frequently marked with California size designations. The inspector MUST verify that the packages are labeled/marked prior to applying the CA size designations. If there are no markings as to the CA size designation, the lot shall be based upon the size designations (1/2 inch or 5/16 inch) in the U.S. Standards or other U.S. sizes defined in the standard.

For Colossal, Jumbo, Extra Large, Large, Standard, and Small sizes, not more than 10%, by count, of the stalks in any container may be smaller than the minimum size required; however, individual containers are restricted to not more than 1-1/2 times (15%) this tolerance. The following terms are defined with the minimum sizes shown:

<b>Loose And Bunched Asparagus Size Chart</b>	
<b>Size Designation</b>	<b>Minimum Diameter</b>
Colossal	1 inch
Jumbo	13/16 inch
Extra Large	10/16 inch
Large	7/16 inch
Standard	5/16 inch
Small	3/16 inch
Extra Small	Means that more than 10% of the stalks in a container are smaller than 3/16 inch.

**Note:** Count of stalks in a 2 lb. bunch may vary 10% from size marked.

**Washington State**

**All sizes are based on the diameter of the stalk at the widest point of the stalk cross section.** Lots shall be designated as Washington Jumbo, Washington Large, or Washington Standard.

Jumbo	13/16 inch in diameter or larger
Extra Large	10/16 inch in diameter or larger
Large	7/16 inch in diameter or larger
Standard	5/16 inch in diameter or larger
Small	3/16 inch in diameter or larger

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**Note:** There is a 10% tolerance for undersize. Stalk length may be specified. Stalks must be fairly uniform in length.

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## 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 that 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.

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### Broken Stalks or Broken Tips (Q or C)

Fresh breaks shall be scored as a condition factor in the markets using the same scoring guide as follows:

#### Scoring Guide

##### *Broken Tips*

Score as damage when broken tips are over 1/8 inch in diameter.

Score as serious damage when broken tips are over 1/4 inch in diameter or when completely broken off from the stalk.

##### *Broken Stalks*

Broken stalks are scored as serious damage.

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### Color (Q)

Asparagus is marketed in various colors including green, purple, and white. The U.S. Standards for Grades of Fresh Asparagus can be applied to all colors of fresh asparagus. The color should be reported in accordance with the facts.

**§51.3720 U.S. No. 1...(b) Color. Unless otherwise specified, not less than two-thirds of the stalk length shall be the color of the lot.**

#### Scoring Guide

Asparagus that does not meet the color requirements shall be scored as damage only against the total tolerance for the grade and reported as “not well colored.”

## **Amount of Color**

**§51.3724 *Amount of color.*** When the asparagus in a lot has less or more color than is specified in the grade it may be described as 1/4 stalk length green, 3/4 stalk length purple, etc., in accordance with the facts.

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## **Dirt or Foreign Material (Q)**

Asparagus is usually washed but may still be affected by adhering dirt or foreign material. Asparagus that is not considered “clean” shall be scored and reported as “dirty.” Dirt will be scored against the individual stalks affected.

### **Scoring Guide**

Score as damage when dirt materially affects the appearance on any portion of the asparagus.

Score as serious damage when the dirt is caked or badly smeared on the stalk and seriously affects the appearance.

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## **Field Freezing (Q)**

Field freezing usually shows in the form of bleaching of some of the leaflet bracts near the tip of the stalk. The stalks become yellowish or slightly darkened with a water-soaked appearance. The epidermis is often blistered and peels off. This defect shall be described on the certificate and reported as “peeling and feathering.”

### **Scoring Guide**

Stalks showing evidence of field freezing shall be scored as serious damage.

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## **Freezing or Freezing Injury (C)**

The term “frozen” should only be used when ice crystals are present. Frozen asparagus will be dull, dark colored, water-soaked, and/or translucent in comparison to unaffected asparagus. Some stalks may be naturally dark green, so some caution needs to be taken when reporting this defect.

“Freezing injury” is the term that should be used when it is evident that the asparagus has been frozen, but is not in a frozen condition at the time of inspection. The affected asparagus may be dull, watery, and/or translucent.

Use the following procedures when reporting freezing or freezing injury:

- 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 the 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 freezing occurred after packing, but not in present location."

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### **Freshness (C)**

Asparagus must be "fresh" to meet the requirements of the U.S. Grades. Asparagus that is wilted, limp, drooping, or the tips are feathered resulting in a paint brush like affect, shall be scored.

#### **\*\*\*\* Scoring Guide**

Score as damage when asparagus is slightly wilted.

Score as serious damage when the asparagus is noticeably wilted and flabby.

### **Feathered Tips**

Score as damage when more than a 1/4 inch of the tip is affected.

Score as serious damage when more than a 1/2 inch of the tip is affected.

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### **Growing (Shooting)**

Asparagus packed with butts on damp moisture pads may continue to grow from 1/2 inch to several inches after being packed and shipped. Receivers may complain about spears growing up through the tops of the containers. Spears that extend through the top of the containers shall be described using the "other" section of the certificate. Show the number of containers affected in general terms; the number of spears by count; and the height above the containers in inches.

The standards do not provide a scoring guide for these spears unless they have curved and are not fairly straight. (Refer to the shape section of this handbook when encountering these type of spears). If other defects are present, those defects shall be examined and scored using their individual scoring guidelines.

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### **Hollow Stalks (Q)**

Hollow stalks are stalks that have a hollow space extending through the center. These stalks can be identified externally by splits on the butts.

## Scoring Guide

Score as damage when the split exceeds 1-1/2 inches in length from the butt of the stalk.

Score as serious damage when the split exceeds 3 inches in length from the butt of the stalk.

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## Insects (Q or C)

Insects (aphids, thrips, and other insects) are sometimes found on fresh asparagus. The inspector should not attempt to identify or name the type of insect present.

## Scoring Guide

Score as damage when more than 2 insects are present on any portion of the asparagus.

Score as serious damage when more than 5 insects are present on any portion of the asparagus.

**Note:** *Live insects shall be reported as condition, if dead report as quality. If both live and dead insects are present, report as condition.*

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## \*\*\*\* Insect Injury (Q or C)

Insect injury may occur as a cavity/hole at the tip of the stalk or as small cavities/holes on the side of the stalk below the tip. The inspector should not attempt to name or identify the insect that caused the injury.

## Scoring Guide

Score as damage when individual holes are over 1/4 inch in diameter or when the aggregate of two or more holes is over 3/8 inch in diameter. On green or purple asparagus, insect injury only affecting the white portion of the stalk that is over 3/4 inch in diameter shall be scored as damage.

Score as serious damage when individual holes are over 3/8 inch in diameter or when the aggregate of two or more holes is over 1/2 inch in diameter. On green or purple asparagus, insect injury only affecting the white portion of the stalk should never be scored as serious damage.

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## Pitted Areas (C)

Pitted areas may be caused by several different factors including sand damage and/or aging. The "pits" can be round or elongated in shape and may be discolored. If discoloration is present in conjunction with the pitted areas, the defect shall be reported as "pitted discolored areas."

## Scoring Guide

Score as damage when pitted areas are not discolored and affect more than 20 percent of the stalk or when pitted areas are discolored and affect more than 10 percent of the stalk.

Score as serious damage when pitted areas are not discolored and affect more than 33 percent of the stalk or when pitted areas are discolored and affect more than 20 percent of the stalk.

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## Purple Spot (Q)

Purple spot was first reported in the U.S. in 1981. The disease has since been reported in all major asparagus-growing regions in the U.S. It was first reported as small, elliptical, slightly sunken, purplish spots that blemished the spears and lowered its marketability. Today, the major damage from purple spot is on the fern growth. Damage to the fern results in defoliation of the needle-like cladophylls that reduces the flow of carbohydrates to the roots.

There are defects (see "rust") that cause a similar affect. If the inspector isn't positively sure that the defect is purple spot, a brief description will suffice.

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## Scoring Guide

Score as damage when an aggregate of more than 10 percent of the stalk is affected.

Score as serious damage when an aggregate of more than 20 percent of the stalk is affected.

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## Rust (Q)

Rust is primarily a field disease which is characterized by spores which later enlarge into patches encompassing the whole plant. A reddish brown or orange color results causing the leaves to fall, giving the plants a naked appearance.

On the stalk this defect is characterized in the spring by orange spores, in early summer by reddish brown spores, and by black spores in the fall and winter. Therefore, what may appear as a different defect, could be a different stage of rust.

There are several defects (see "purple spot") that cause a similar affect. If the inspector isn't positively sure that the defect is rust, a brief description will suffice.

## Scoring Guide

Score as damage when an aggregate of more than 10 percent of the stalk is affected.

Score as serious damage when an aggregate of more than 20 percent of the stalk is affected.

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## Seed (Q)

Hot weather may cause asparagus tips that are fairly compact to have greenish seeds showing around the petals.

## Scoring Guide

Score as damage when seeds are large or numerous enough to materially affect the appearance.

Score as serious damage when the seeds are large, numerous and discolored.

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## Shape (Q)

Misshapen or crooked stalks may be caused by an injury to the side of a growing stalk, hard or poorly tilled soil, sticks, stones, and careless cutting. The growth directly above the injury is affected, but growth on the opposite side continues, resulting in a crooked or curled stalk. Strong winds or frost may also cause stalks to grow crooked.

The U.S. No. 1 grade requires stalks to be fairly straight.

The U.S. No. 2 grade requires the stalks to not be badly misshapen.

## Scoring Guide

Score as damage when stalks are not fairly straight and report as “misshapen.”

Score as serious damage when the the stalks are badly misshapen and report as “misshapen.”

**Note:** Refer to Asparagus Photo No. 10 and 11 (Appendix II in this handbook) for illustrations as to the degree of curvature permitted in each grade.

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## Shriveling (C)

Shriveling of the stalk, may be caused by age of the product or excessive moisture loss.

## Scoring Guide

Score as damage when more than 20 percent of the stalk is noticeably shriveled.

Score as serious damage when more than 40 percent of the stalk is noticeably shriveled.

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## Sour Asparagus

When asparagus is packed wet or the contents of the container have been immersed in water, a soured condition may develop unless the stock has been promptly cooled and kept at a low temperature. This condition can be detected by the characteristic sour odor. This factor shall not be scored as a defect, but may be reported at the applicant's request, not affecting grade.

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## Spreading (C)

Spreading often indicates that the asparagus is over mature. Tips that are "spread" usually have progressed beyond the stage of being compact or fairly compact.

## Scoring Guide

Score as damage when the tips are more than slightly spread.

Score as serious damage when the tips are badly spread.

**Note:** Refer to Asparagus Photo No. 6, 7, 12, and 13 (Appendix II in this handbook) for illustrations as to the amount of spreading allowed in each grade.

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## Trimming (Q)

The U.S. No. 1 grade requires stalks to be well trimmed.

The U.S. No. 2 grade requires stalks to be fairly well trimmed.

These terms are defined as follows:

**§51.3727 Well Trimmed.** "Well Trimmed" means that at least two-thirds of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not stringy or frayed.

**§51.3730 Fairly well trimmed.** "Fairly well trimmed" means that at least one-third of the butt of stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not badly stringy or frayed.

### **Scoring Guide**

Score as damage when the stalks are not well trimmed and report as “not well trimmed.”

Score as serious damage when the stalks are not fairly well trimmed and report as “not fairly well trimmed.”

**Note:** *There is a separate 10% tolerance in both the U.S. No. 1 and U.S. No. 2 grades for stalks that do not meet the trimming requirements.*

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### **Watersoaked Tips (C)**

The cause of watersoaked tips is unknown; however hydrocooling and transit/storage temperature may play a role in the prevalence of this defect.

### **Scoring Guide**

Score as damage when more than a 1/4 inch of the tip is affected.

Score as serious damage when more than a 1/2 inch of the tip is affected.

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### **Decay (C)**

Each grade of asparagus is required to be free from decay. The type of decay is not to be reported on the certificate, but the location shall be reported (decay affecting tips, butts, etc.). Furthermore, when the decay is in excess of the tolerance for the grade, report the degree of advancement as early, moderate, or advanced stages using general terms.

### **Scoring Guide**

Score any amount against the 1% restricted decay tolerance.

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# Appendix I U.S. Grade Standards

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## United States Standards for Grades of Fresh Asparagus<sup>1</sup>

Effective February 23, 2006

### Grades

51.3720 U.S. No. 1.

51.3721 U.S. No. 2.

### Application of Tolerances

51.3722 Application of tolerances.

### Diameter Classification

51.3723 Diameter classification.

### Amount of Color

51.3724 Amount of color.

### Stalk Length

51.3725 Stalk length.

### Definitions

51.3726 Fresh.

51.3727 Well trimmed.

51.3728 Damage.

51.3729 Diameter.

51.3730 Fairly well trimmed.

51.3731 Badly misshapen.

51.3732 Serious damage.

### Metric Conversion Table

51.3733 Metric conversion table.

### Grades

#### §51.3720 U.S. No. 1.

"U.S. No. 1" consists of stalks of asparagus which are fresh, well trimmed, and fairly straight; which are free from decay and free from damage caused by spreading or broken tips, dirt, disease, insects, or other means.

(a) **Size.** Unless otherwise specified, the diameter of each stalk is not less than one-half inch.

(b) **Color.** Unless otherwise specified, not less than two-thirds of the stalk length shall be the color of the lot.

(c) **Tolerances.** In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) **For defects.** 10 percent for stalks in any lot which fail to meet the requirements of this grade other than for trimming, including therein not more than 5 percent for defects causing serious damage: **Provided**, That not more than one-fifth of this latter amount, or 1 percent, shall be allowed for stalks affected by decay. In addition, not more than 10 percent of the stalks in any lot may fail to meet the trimming requirement.

(2) **For off-size.** 10 percent for stalks in any lot which fail to meet the specified diameter or length requirements.

#### §51.3721 U.S. No. 2.

"U.S. No. 2" consists of stalks of asparagus which are fresh, fairly well trimmed, and not badly misshapen; which are free from decay and free from serious damage caused by spreading or broken tips, dirt, disease, insects or other means.

(a) **Size.** Unless otherwise specified, the diameter of each stalk is not less than five-sixteenths inch.

(b) **Color.** Unless otherwise specified, not less than one-half of the stalk length shall be the color of the lot.

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<sup>1</sup>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.

(c) **Tolerances.** In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are provided as specified:

(1) **For defects.** 10 percent for stalks in any lot which fail to meet the requirements of this grade other than for trimming, including therein not more than one-tenth of this tolerance, or 1 percent, shall be allowed for stalks affected by decay. In addition, not more than 10 percent of the stalks in any lot may fail to meet the trimming requirement.

(2) **For off-size.** 10 percent for stalks in any lot which fail to meet the specified diameter or length requirements.

#### **Application of Tolerances**

##### **§51.3722 Application of tolerances.**

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

(a) Packages which contain more than 50 stalks shall have not more than 1-1/2 times a specified tolerance of 10 percent or more, or not more than double a specified tolerance of less than 10 percent: **Provided**, That the averages for the entire lot are within the tolerances specified for the grade.

(b) Packages which contain 50 stalks or less shall have not more than 4 times the tolerance specified, except that at least 2 defective and 2 off-size stalks may be permitted in any package: **Provided**, That not more than 1 stalk which is affected by decay may be permitted in any package: **And provided further**, That the averages for the entire lot are within the tolerances specified for the grade.

#### **Diameter Classification**

##### **§51.3723 Diameter classification.**

The following terms are provided for describing the diameters of any lot:

Very Small.....	Less than 5/16 inch.
Small.....	5/16 inch to less than 8/16 inch.
Medium.....	8/16 inch to less than 11/16 inch.
Large.....	11/16 inch to less than 14/16 inch.
Very Large.....	14/16 inch and up.

#### **Amount of Color**

##### **§51.3724 Amount of color.**

When the asparagus in a lot has less or more color than is specified in the grade it may be described as 1/4 stalk length green, 3/4 stalk length purple, etc., in accordance with the facts.

#### **Stalk Length**

##### **§51.3725 Stalk length.**

There is no minimum stalk length specified in the grades but the minimum stalk length may be stated in terms of whole inches or whole and half inches in connection with the grade designation as "U.S. No. 1, 8-1/2-inch minimum," "U.S. No. 1 Large, 7-inch minimum," "U.S. No. 1 Large, 10-1/2-inch minimum," etc., in accordance with the facts.

#### **Definitions**

##### **§51.3726 Fresh.**

"Fresh" means that the stalk is not limp or flabby.

##### **§51.3727 Well trimmed.**

"Well trimmed" means that at least two-thirds of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not stringy or frayed.

##### **§51.3728 Damage.**

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

##### **§51.3729 Diameter.**

"Diameter" means the greatest thickness of the stalk measured at a point approximately 1 inch from the butt.

##### **§51.3730 Fairly well trimmed.**

"Fairly well trimmed" means that at least one-third of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not badly stringy or frayed.

##### **§51.3731 Badly misshapen.**

"Badly misshapen" means that the stalk is so badly flattened, crooked or otherwise so badly deformed that its appearance is seriously affected.

**§51.3732 Serious damage.**

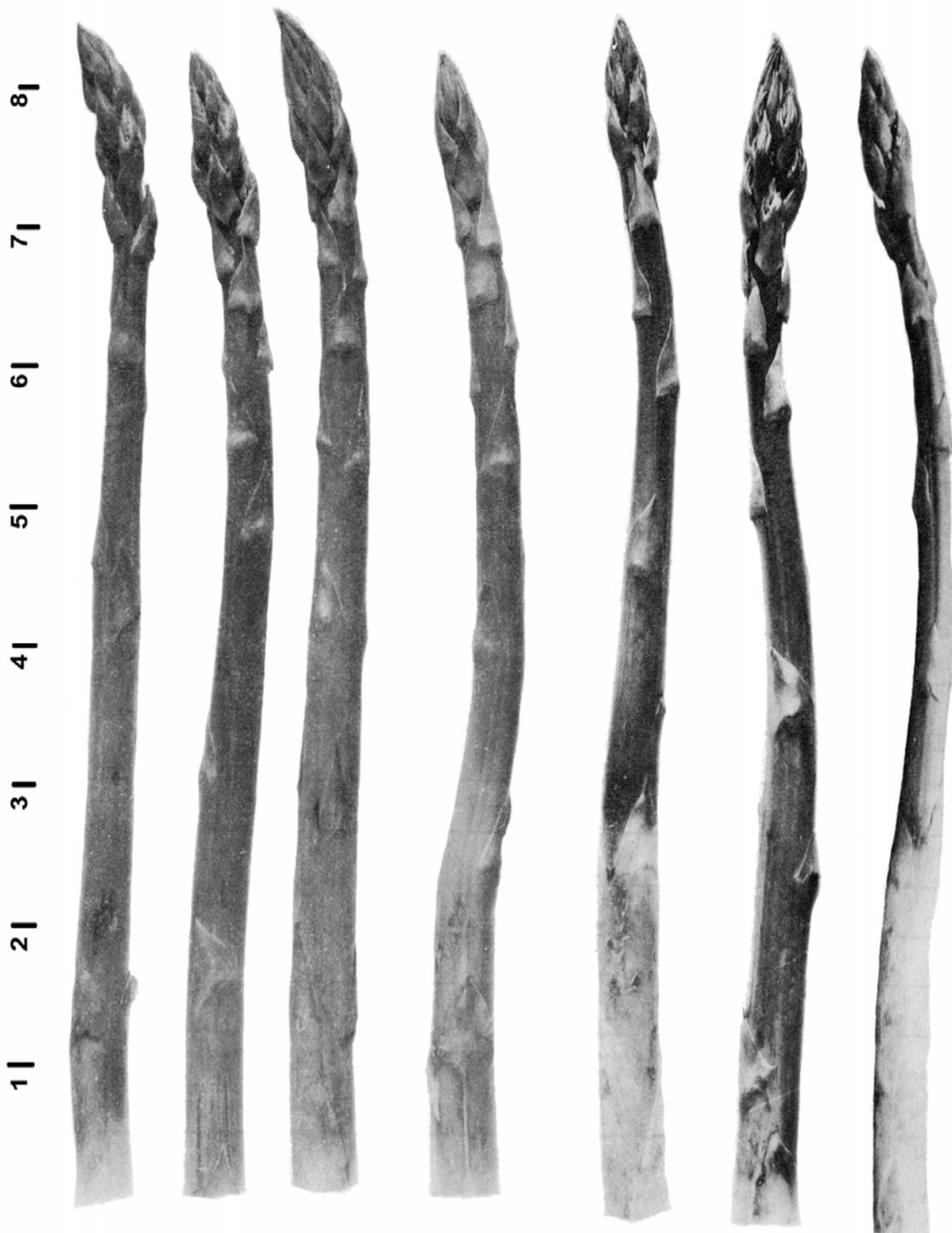
"Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the stalk.

**Metric Conversion Table**

**§51.3733 Metric conversion table.**

Inches	Millimeters (mm)
1/8 equals.....	3.2
1/4 equals.....	6.4
5/16 equals.....	7.9
3/8 equals.....	9.5
1/2 equals.....	12.7
5/8 equals.....	15.9
11/16 equals.....	17.5
3/4 equals.....	19.1
7/8 equals.....	22.2
1 equals.....	25.4
1-1/4 equals .....	31.8
1-1/2 equals .....	38.1
1-3/4 equals .....	44.5
2 equals.....	50.8
3 equals.....	76.2
4 equals.....	101.6
5 equals.....	127.0
6 equals.....	152.4
7 equals.....	177.8
8 equals.....	203.3
9 equals.....	228.7
10 equals.....	254.1

## Appendix II Visual Aids



**10.** FAIRLY STRAIGHT ASPARAGUS STALKS. PERMITTED IN U.S. NO. 1

**ASPARAGUS**



Not Badly Misshapen Asparagus Stalks. Permitted in U.S. No. 2.

Asparagus, Photo No. 11  
November 1994  
(Previously No. 11, no date)

# ASPARAGUS



Closed and Slighty Spread Tips. Allowed in U.S. No. 1.

Asparagus, Photo No. 6  
November 1994  
(Previously No. 6, no date)

## ASPARAGUS



Spreading Tips. Not U.S. No. 1.

Asparagus, Photo No. 7  
November 1994  
(Previously No. 7, No date)

ASPARAGUS - SPREADING TIPS



A - U.S.No. 1



B - U.S. No. 1 , Lower Limit

Asparagus, Photo No. 12  
February 1991  
(Previously No. 12, no date)

## ASPARAGUS - SPREADING TIPS

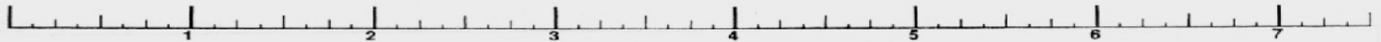


U.S. No. 2 - Lower Limit. Damaged By Spreading, But Not Seriously Damaged.

Asparagus, Photo No. 13  
February 1991  
(Previously No. 13, no date)



**Notesheet (Back) Example 1**



<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
PACK: <i>Tight</i>	PACK: /	PACK: /	PACK: /
SIZE: <i>7/16 - 9/16"</i> <i>No undersize</i>	SIZE: /	SIZE: /	SIZE: /

<b>SCORESHEET</b>				(ES)	(Broken Stalks)								
PLI Number	Other I.D.	TEMP.	Sample CT	Dk	Quality Defects	Pitted Areas	Shriveling	Spreading	Size range	under 7/16"			
					SD	SD	SD	SD					
NONE		36	50	0	1 <sup>2</sup> 0	42 0	0 0	42 1 <sup>2</sup>	7/16 - 8/16	0			
VI		35	50	1 <sup>2</sup>	1 <sup>2</sup> 1 <sup>2</sup>	0 0	0 0	63 0	7/16 - 9/16	0			
VI		37	100	1	2 2	4 1	3 1	3 0	7/16 - 8/16	0			
II		37	50	0	0 0	0 0	0 0	42 1 <sup>2</sup>	8/16 - 9/16	0			
			4	-1	2 1	2 0	1 0	4 1					

US No 1

Gen. Fresh  
well trimmed  
fairly straight

REMARKS / RESTRICTIONS / SPI *Applicant request size to be based on CA size "Large"*

CARLOT Basis: _____	REPORTED TO: <i>Steve - 0</i>	INSPECTED BY: _____
HOURLY Basis: _____	DATE: <i>3/16/07</i> TIME: <i>0845am</i>	<i>John Doe</i>
TRAVEL Time: <i>Example</i>	REQUESTED BY: <i>Steve - 0</i>	ASSISTED BY: _____
EXPENSES: _____	DATE: <i>3/16/07</i> TIME: <i>0600am</i>	
EST. TOTAL: _____		

\*U.S. Government Printing Office: 1993 - 339-136





**Notesheet (Back) Example 2**

A				B				C				D			
PACK: <b>FIT</b>				PACK: /				PACK: /				PACK: /			
SIZE: 10/16 - 12/16 No undersize				SIZE: /				SIZE: /				SIZE: /			
SCORESHEET					(NFS, rust)		Wilted/Flabby		Shriveling		size range		under 1/2"		
PLI Number	Other I.D.	TEMP.	Sample CT	DK	Quality Defect		SD		SD		10/16 - 12/16		10/16 - 12/16		
NONE		36	100	0	1	0	13	10	7	3	10/16 - 12/16		0		
NONE		36	50	0	0	0	6 <sup>12</sup>	2 <sup>0</sup>	4 <sup>8</sup>	2 <sup>4</sup>	10/16 - 12/16		0		
NONE		36	50	0	2	0	9 <sup>12</sup>	4 <sup>8</sup>	4 <sup>8</sup>	2 <sup>4</sup>	10/16 - 12/16		0		
			3		2	0	14	7	8	4					
							(12-18)		(7-8)						
Fails to grade US No 1 acct. condition.															
mostly Fresh Generally fairly straight well trimmed															
REMARKS / RESTRICTIONS / SPI															
Wilted/Flabby asparagus affected by feathered tips as well.															
CARLOT Basis: _____					REPORTED TO: <b>Rick</b>					INSPECTED BY: <b>IM Inspector</b>					
HOURLY Basis: <b>EXAMPLE</b>					DATE: <b>3/21/07</b> TIME: <b>0750 AM</b>					DATE: _____ TIME: _____					
TRAVEL Time: _____					REQUESTED BY: <b>Rick</b>					ASSISTED BY: _____					
EXPENSES: _____					DATE: <b>3/21/07</b> TIME: <b>0630 AM</b>					DATE: _____ TIME: _____					
EST. TOTAL: _____															



**Certificate Sample 3**

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<b>USDA</b>		<b>U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE</b> http://FPBInspections.ams.usda.gov		<b>INSPECTION CERTIFICATE</b>		<b>T-000-0167-00020</b>	
				<b>PAGE 1 of 1</b>			
<b>CARRIER or LOT ID:</b> LOT 1212		<b>APPLICANT:</b> (000000000)TEST APPLICANT		<b>REQUESTED:</b> 12/13/2007 1:07 PM			
<b>LOADING STATUS:</b> UNLOADED		WASHINGTON, DC		<b>STARTED:</b> 12/14/2007 8:00 AM			
<b>STATED BY:</b> APPLICANT		<b>SHIPPER:</b> TEST APPLICANT		<b>COMPLETED:</b> 12/14/2007 9:45 AM			
<b>ADDITIONAL ID:</b> NA		WASHINGTON, DC		<b>PASSWORD FOR ONLINE ACCESS</b>			
<b>CARRIER TYPE:</b> NA		<b>MARKET OFFICE:</b> HQ		5S25S27CKCSZN5YZ			
<b>REFRIG UNIT:</b> NA		<b>DOORS:</b> NA		<b>INSP SITE:</b> APPLICANT'S STORE		<b>ESTIMATED FEE:</b> NO CHARGE	
<b>REMARKS:</b> INSPECTION BASED ON US NO. 1 SMALL, AT APPLICANT'S REQUEST.							

LOT A (QAC) - ASPARAGUS, FRESH			
<b>TEMP:</b> 37° to 39°F	<b>INSP CT:</b> YES	<b>NUMBER OF CONTAINERS:</b> 843 CARTON(S)	<b>ORIGIN:</b> PU
<b>MARKINGS:</b> BRAND: EAT GOOD MARKINGS: EAT GOOD, NET WT. 11 LBS., MARKED: SMALL			
<b>PLI:</b> NONE		<b>OTHER ID:</b>	

INJURY	DAM	SER DAM	V.S. DAM	OFFSIZE/DEFECTS
NA	12	0	NA	DIAMETER UNDER SPECIFIED MINIMUM 5/16 INCH (4 TO 18%)
NA	2	0	NA	QUALITY DEFECTS (0 to 4%)(HOLLOW STALKS)
NA	1	0	NA	SPREADING (0 to 2%)
NA	0	0	NA	DECAY
NA	15	0	NA	CHECKSUM

<b>GRADE:</b>	FAILS TO GRADE U.S. NO. 1 SMALL, ACCOUNT UNDERSIZE.
<b>LOT DESC:</b>	DIAMETER: 4/16 TO 10/16 INCH IN DIAMETER, PACK: FAIRLY TIGHT



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 (1.0.12.1)	<b>Signature:</b> <i>L.M. Inspector</i>	<b>Date:</b> 12/14/2007

\*\*\*\*