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Programs

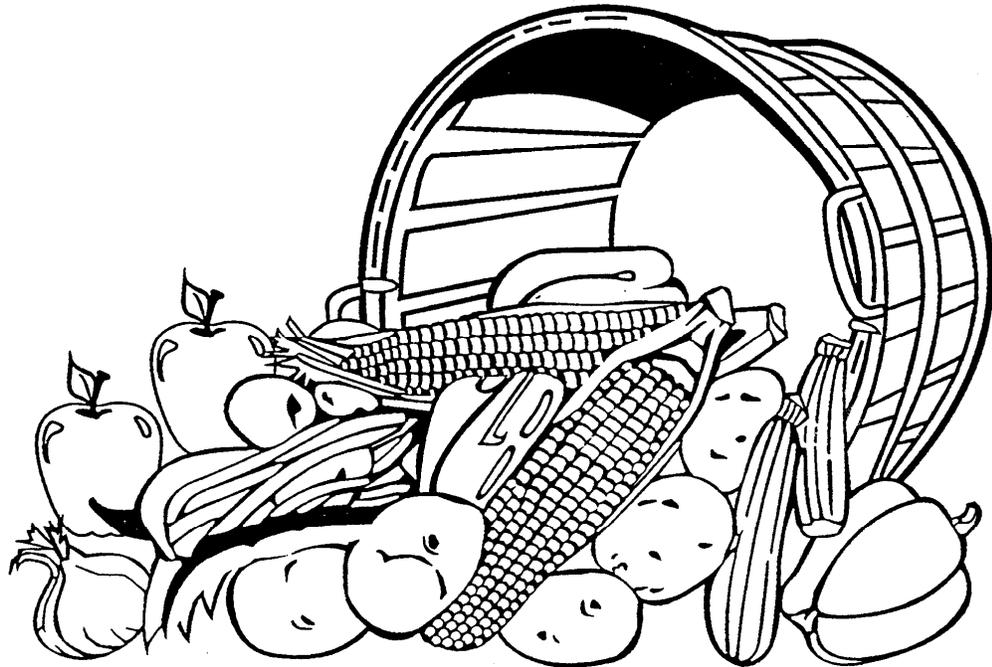
Fresh Products
Branch

November 2002

Previously
April 1993

Snap Beans

Shipping Point and Market Inspection Instructions



Shipping Point And Market Inspection Instructions For Snap Beans

These inspection instructions are specifically developed by the Fresh Products Branch to assist officially licensed inspectors in the interpretation and application of the U.S. Standards for Grades of Snap Beans, Section 51.3829.

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

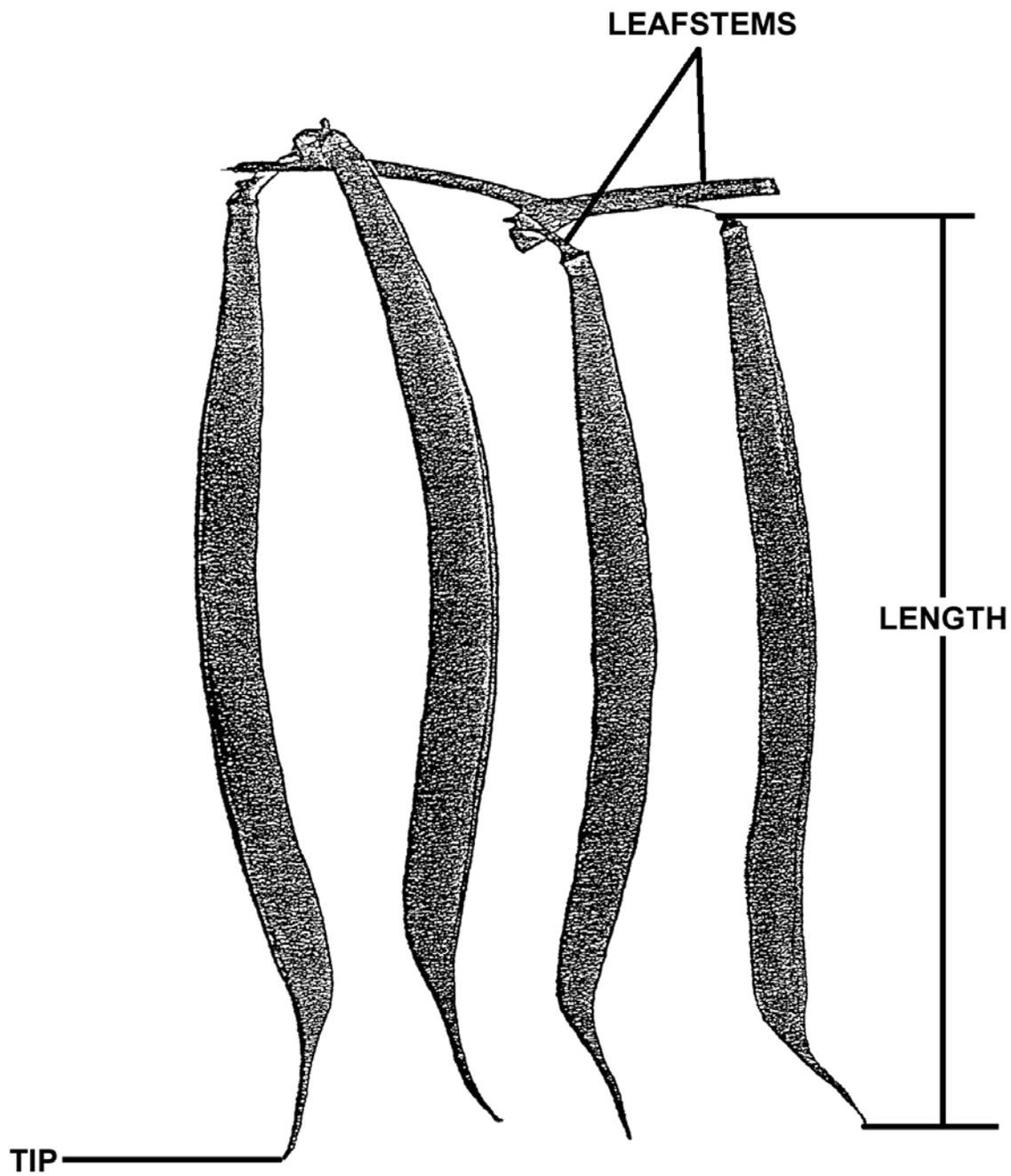
Refer to the General Inspection Instructions for additional information pertaining to date, inspection point, carrier, condition of carrier, lading, etc. that is not covered in this handbook. Reference to "General Inspection Instructions" in all Fresh Products Branch publications refers to any one or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

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

November 2002

This publication may be duplicated without authorization from USDA.

This replaces Market Inspection Instructions for Snap Beans dated January 1973. Reformatted November 2002, previously April 1993.



SNAP BEANS

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.

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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.

Size of Sample

The tolerances of the U.S. Standards for Grades of Snap Beans are determined on the basis of weight. All weights shall be recorded in ounces. **At least 50 ounces (3.125 pounds) shall be examined from each sample container except for French Beans where at least 25 ounces shall be examined.** Whenever a container tolerance or lot tolerance is exceeded, the size of at least one sample shall be doubled (100 ounces / 6.25 pounds). In other words, don't put a lot out of grade without running at least one sample that is at least double the normal size.

Samples should be taken from various locations within the container being examined. Beans are generally tightly packed into hampers or wire bound crates and have a tendency to settle during shipment. Therefore, it is suggested that the contents be dumped out or into another container so that a representative sample may be obtained from any part of the sample container. If it is not practical to empty the contents, samples shall be taken extending from the top to the bottom of at least one sample. In the remaining samples beans should be taken from the top to as near the bottom of the container as possible.

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 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

§ 51.3835 Tolerances. ... (b) U.S. No. 1. Thirteen percent for beans in any lot which fail to meet the requirements of the grade, including not more than 10 percent damage by grade defects other than damage by broken beans, including not more than 5 percent shall be allowed for defects causing serious damage, including therein, not more than 1 percent for beans affected by soft rot.

Keep in mind that when grading a U.S. No. 1 lot as long as the total tolerance does not exceed 13%, the lot may have up to 13% damage by Broken Beans and/or up to 10% damage by Other Defects in any combination. Remember, **the combination may not exceed the total tolerance of 13%**. The U.S. Fancy and U.S. No. 2 grade tolerances as listed below in chart form may be applied in a similar fashion.

Summary Of Tolerances

	U.S. FANCY	U.S. NO.1	U.S. NO.2
Total Defects, <i>including</i>	10%	13%	15%
Broken Beans	3%	13%	15%
Other Than Broken Beans	10%	10%	10%
Serious Damage, <i>including:</i>	5%	5%	15%
Soft Rot	1%	1%	1%

Application of Tolerances

§ 51.3836 Application of tolerances. The contents of individual packages in the lot are subject to the following limitations:

(a) For tolerances of 10 percent or more, individual packages may contain not more than one and one-half times the tolerances specified...

(b) For a tolerance of less than 10 percent, individual packages may contain not more than double the tolerance specified: Provided, that the average for the entire lot is 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 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.

Product

The common name Snap Beans, shall be used to describe this commodity in the product heading. Type such as “Wax,” “Pole,” “Green, round” etc may be reported in conjunction with Snap Beans or may be reported in the “Product/Variety” section on the shipping point inspection certificates or in the “Lot ID” section on market notesheet and certificate.

Snap beans are beans that are used in their entirety as opposed to shell beans. Snap bean pods are flat, oval, or nearly cylindrical in cross section.

Green, wax (yellow), round, oval, semi-flat, and flat are the main distinguishing characteristics of types of beans.

The trade may refer to snap beans as bush, half runner, pole, or wax beans.

Types that are not considered snap beans include Fava, Lima, Pinto, Calico, or Cranberry beans. These cannot be certified under the U.S. Grade Standards for Snap Beans.

The Inspection Service does not certify variety. If variety were questioned, the inspector should inform interested parties that only type may be certified. It may also be pointed out that when type is a factor in a general run of beans, such as green-round beans in a green-flat type lot, or other distinctly different types, it will be considered a quality defect. The defect shall be reported as “dissimilar varietal characteristics.”

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 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.

Snap Beans are usually packed and shipped in waxed and un-waxed cartons, wooden hampers or wire-bound crates.

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 inspectors 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. The inspector can certify only to the marks and has no means of verifying what state or country the snap beans are grown.

CONDITION OF PACK

Filling of containers of snap beans should be described on the notesheet as follows:

Well Filled: This is the desirable condition of pack and means that the beans should be in contact with the cover and there is virtually no movement of the beans.

Fairy Well Filled: This condition means that the pack is not quite full or that there may be slight movement within the container. The pack is not ideal, but is not sufficiently slack to justify the use of the term “slack”. This term shall be used in describing pack when the beans are not in contact with, but not more than 1/2 inch below the cover.

Slack: This term is used when the pack is more than 1/2 inch below the cover and movement is readily apparent. When this condition is encountered it shall be described in inches and fractions of inches below the cover.

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, and these must be reported in greater detail specifying location in lot or load.

SIZE

The U.S. Standards for Grades of Snap Beans do not have “specific” size requirements, however they do have the following “general” size requirements:

U.S. Fancy: Beans are required to be of **reasonable and fairly uniform size**.

U.S. No. 1: Beans are required to be of **reasonable size**.

U.S. No. 2: No size requirement.

§ 51.3838 Reasonable size. “Reasonable size” means that the pods are not spindly or excessively short for the variety and have not been prematurely picked.

“Fairly Uniform” means beans are not of excessively different lengths. If beans are found that do not meet these requirements they will be considered as quality defects. The defects shall be reported as “not fairly uniform” or “spindly.”

Reporting Size

Size shall be reported only at applicants request. When reporting size, the length of the pods shall be reported to the nearest quarter inch. The length of the pods means the overall length from the tip to the point of attachment with the stem. Measurement of beans should include the bean pod only and not stem attachments. Also, the outer curve of the bean from end to end should be used to determine length.

Unless size is very nearly uniform (which is seldom the case), the range of length shall be followed by a “mostly” range.

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.

Appearance (Brightness) (Q)

This factor should be judged from the standpoint of natural color of the beans, and the effects that discoloration, adhering dirt, sand, or other foreign material have upon it. Furthermore the inherent characteristics of the variety should be considered. Certain varieties by their very nature are not as bright as others. **Brightness should be based on the general appearance of the lot as a whole.**

On shipping point certificates brightness may be reported with other quality and condition factors or as directed by the supervisor. When brightness is irregular in a lot, a combination of descriptive terms should be used to describe the appearance, such as “mostly bright, some fairly bright” or “mostly fairly bright, some slightly dull.” When performing market inspections, if a lot of beans fails to meet the brightness requirement for the grade, describe the appearance in the “other” section on the certificate and fail the lot to grade account of brightness. However, keep in mind that this factor is rarely a major problem.

U.S. Fancy: Beans are required to be **Bright**.

U.S. No. 1: Beans are required to be **Fairly Bright**.

U.S. No. 2: No brightness requirement.

Broken Beans (Q)

§ 51.3841 Damage. ...(b) Broken beans shall be considered as damage when:

(1) There is one break present in the thick portion of the bean or one break at each end in the thin portion of the bean;

- (2) Any break that is materially affected by dirt or discoloration;
- (3) Any break that is ragged and materially detracts from the appearance; or
- (4) Unless otherwise specified, the remaining portion of the bean is less than 3-1/2 inches in length (5-1/2 inches for pole type beans).

§ 51.3844 Serious damage. ...(b) Broken beans shall be considered as serious damage when:

- (1) There is a break on each end in the thick portion of the bean;
- (2) Any break is seriously affected by dirt or discoloration;
- (3) Any break is ragged and seriously detracts from the appearance or exposes a seed; or
- (4) Unless otherwise specified, the remaining portion of the bean is less than 3 inches in length (5 inches for pole type beans).

Any bean considered “mechanically damaged” should be scored as a broken bean. Beans, which do not have a clean “break”, i.e. that are shredded, mangled, or have a broken portion still hanging on should be scored as a broken bean. Scoring should be considered on an appearance basis only if none of the definitions for damage or serious damage by broken beans in the standard seem to apply. (See Appendix II.)

Cleanness (Q)

“**Clean**” means that a bean is practically free from dirt, sand or other foreign material. This is the requirement of the **U.S. Fancy** grade.

“**Fairly Clean**” means that there is some dirt, sand or other foreign material on a bean, but only enough to slightly affect the appearance.

“**Slightly Dirty**” or “**Slightly Sandy**” means that there is considerable dirt, sand or other foreign material on a bean but *not* sufficient to damage the appearance. This is the maximum allowed for the **U.S. No. 1** grade.

“**Dirty**” or “**Sandy**” means the dirt, sand or other foreign material on a bean damages the appearance sufficiently to justify scoring the bean as damaged by dirt.

Beans that are scored as being damaged or seriously damaged by dirt should be considered on the basis of appearance. The general definitions for damage and serious damage are used in connection with the effect on the edible or marketing quality of the beans.

Foreign Material (Q)

Foreign Material is any extraneous material not attached to beans. This may include loose and unattached leaves, leafstems, vines or any other foreign matter. Score any amount against the total tolerance of the grade being applied.

On market certificates Foreign Material is recorded in the first column (average defects) only, regardless of the grade being applied.

Freezing Or Freezing Injury (C)

Freezing or freezing injury occurs under such a variety of conditions that it is a most important factor to accurately describe on the inspection certificate. This injury, if of noticeable extent, detracts greatly from the commercial value of the lot and must be carefully reported.

Beans affected by freezing have a watersoaked, flabby texture. In general, the affected containers and beans in those containers will also reveal a definite pattern of injury.

When reporting freezing or freezing injury, remember to:

- Record pulp temperatures taken in various locations.
- Determine and record extent of injury in load.
- Determine and record extent of injury in containers.
- Determine and record degree to which individual specimens are affected.
- Describe the pattern of freezing or freezing injury in clear concise terms.
- Percentages should not be used to describe the amount of freezing injury.

Note: Extreme care should be taken when determining if beans are injured by freezing. *Some bacterial infections that affect beans exhibit watersoaked areas that have a similar appearance to freezing injury.* To eliminate confusion always check pulp temperatures and look for a distinct pattern of affected containers and affected stock in those containers which indicates freezing injury. In most cases bacterial infections will not tend to exhibit any pattern. One other clue that may indicate bacterial infection as opposed to freezing injury is a greasy, oily type of exudate accompanying the watersoaked appearance of the beans. And finally, beans affected by freezing will either be frozen solid or be limp and flabby from injury. Those affected by bacteria are generally still firm.

If it is determined that bacteria instead of freezing injury affect the beans, the percentage of damage or serious damage shall be determined on the basis of appearance and the defect described (e.g., watersoaked translucent areas).

Freshness And Firmness (C)

The U.S. Fancy and U.S. No. 1 grades require beans to be fresh. The U.S. No. 2 grade requires beans to be fairly fresh. **All grades require beans to be firm.**

Beans are a highly perishable, succulent commodity and must reach the consumer quickly or the edible quality may become greatly reduced. In ideal condition pods are firm, crisp, and should snap readily when bent at right angles. Improper refrigeration or delay in marketing may cause the pods to become wilted or flabby.

“Fresh” means beans are not old, wilted or dull in appearance.

“Firm” means beans are not soft, flabby, shriveled, or pliable and snap readily when bent at right angles.

When beans are encountered that fail to meet the requirements of the grade being worked for freshness or firmness they should be scored as **wilted** or **flabby**.

Firmness may be used to complement freshness. Suitable terms for describing freshness and firmness are:

- Fresh And Firm
- Fairly Fresh And Firm
- Slightly Wilted
- Slightly Flabby
- Wilted And Flabby

Insect/Worm Injury (Q or C)

Injuries caused by insects or worms should be scored on much the same basis as scars. Older injury will be in the form of healed scars, but usually they are more unsightly in appearance or deeper and more penetrating than wind scars. Again, appearance will be the factor in scoring as damage or serious damage.

As a general rule any time the wall of the pod is penetrated by insects or worms it shall be considered serious damage. Surface feeding on the pod may be either damage or serious damage depending on the appearance.

At destination, if insects or worms are alive, or there is evidence of fresh frass, treat as a condition factor. If the insects or worms are dead, treat as a quality factor. If both live and dead insects are present, then treat as a condition factor.

Leafstems (Q)

Leafstems shall refer to any part of the plant that is still attached to beans. This includes vines and stems, with or without the leaves attached. **Both the “leafstem” and the attached bean(s) shall be weighed together when scoring for leafstems.**

Damage by leafstems: 1, 2 or 3 beans of reasonable size with a leafstem attached that is over ½ the length of the longest bean, or 4 or more beans of reasonable size in a cluster.

Beans that are not of reasonable size as defined in the standard shall be detached from the leafstem and scored as spindly. (See section on “Size.”)

Beans with leafstems that are not scorable but have individual beans, which are damaged by other means, shall be detached and scored as a defect.

Beans with scorable leafstems that have individual beans, which are damaged by other means, shall be scored for leafstems only.

Beans with scorable leafstems, which are also seriously damaged by other defects or soft rot, shall be detached from the stems and scored on the basis of the defect.

Note: If in any of the scoring guidelines the bean(s) are required to be detached from the leafstem, the remaining leafstem shall be included in foreign material, or if there are still beans remaining on the leafstem they shall be graded according to the scoring guidelines for leafstems.

Maturity (Q)

The stage of maturity is probably the most important factor of quality in connection with snap beans. In the ideal stage for domestic use the pods are thick walled, meaty, and tender. As beans develop toward an undesirable stage of maturity for domestic use the pods become thinner walled, somewhat tough and woody, with large, well developed seeds.

Prematurely picked pods are not desirable because they are too young, are apt to be small, thin and curled. Underdeveloped pods wilt quickly and frequently become shriveled before they reach the consumer.

U.S. Fancy: Beans are required to be **Young and Tender**.

U.S. No. 1: Beans are required to be **Fairly Young and Tender**.

U.S. No. 2: Beans are required to be **Not Overmature**.

The inspector should, as a matter of course, break an occasional bean as the sample is graded. By starting with one of the older looking beans in the sample, the inspector is likely to discover whether the lot has any tendency toward overmaturity or

dryness. If the older beans do not meet the grade requirements for maturity, it is necessary to break beans of a somewhat younger appearance. The number and size of the beans broken will vary considerably with the quality of the lot being graded.

Beans should be broken at about mid-point of their length by bending the ends around until the bean snaps. The ease and cleanness with which the bean snaps are good indications of its maturity. The flesh of a tender bean, when exposed by breaking, should have a succulent appearance. It should look watersoaked and glassy rather than dry and pithy.

After the bean has been broken or snapped, the exposed ends should be examined for fiber or strings as well as for succulence. **Tenderness and succulence are usually closely related, and the bean is judged for maturity on the basis of both.**

“Young and Tender” is the ideal stage of maturity in which there is a clean break with no trace of fibers.

“Fairly Young and Tender” means when broken the bean has a clean break with practically no trace of fibers or strings. If there are only small hair-like fibers protruding very slightly, the bean should be considered fairly young and tender. Beans which fail to meet the requirements of fairly young and tender should be reported on the certificate as not fairly young and tender.

“Not Overmature” If there are a number of ragged, spiny edges caused by protruding ends of fiber or strings the bean is not considered tender nor is it overmature. A bean at this stage of maturity would meet the requirements of the U.S. No. 2 grade.

§51.3843 Overmature. "Overmature" means that the walls of the pods are distinctly woody or fibrous.

If the beans break with difficulty and the fiber is heavy, causing long protruding fibers or strings or “shark’s teeth”, the bean should be considered tough or over mature.

Russeting (C)

One of the most common defects that affect beans in transit and at destination is russeting. This disorder is a physiological disease and should not be confused with the term “rust”, a commonly accepted name for a fungus disease of beans. (“Rust” is rarely seen on pods and is characterized by raised reddish-brown areas.)

Russeting is characterized by the death of surface cells anywhere on the pod, which then become rusty brown to chestnut brown. Browned areas are irregular in shape and without definite margins, but they sometimes occur as short, narrow somewhat parallel areas. The dead tissue is usually not sunken.

Care should be taken to not confuse russeting with similar appearing defects such as sunscald, wind and sand scarring, and scarring caused by the powdery mildew fungus. Each of these defects, although similar, has symptoms that are quite distinct from russeting. Sunscald occurs on only one side of the pod. Wind and sand scarring produces chafed areas and the brown color is duller than russeting. Powdery Mildew produces discolored spots, which are usually sunken and more speckled than russeting. Beans with stages of the disease showing the white powdery fungus usually accompany this. When the fungus is rubbed away, a reddish-brown discoloration is exposed. Refer to sections describing these other defects for further information.

When all the factors above have been considered closely and the inspector is still in doubt as to what the suspect defect is, he/she shall give a description of the defect and consider it a condition factor.

Russeting is to be scored on the basis of appearance. The general definitions of damage and serious damage shall be used in determining the percentage of beans affected by russeting.

Scars (Q)

Scars on beans are generally caused by high winds blowing sand. The damage occurs over the whole pod. Affected areas appear chafed with dull brown discoloration of tissues. The scoring of scars requires careful judgment on the part of the inspector. Size, color, roughness and location of the scar on the bean must all be taken into consideration. **Scars are scored on an appearance basis.** The general definitions of damage and serious damage are to be applied in the consideration of how scars affect the edible or marketing quality of the beans.

Shape (Q)

§51.3839 Well formed. "Well formed" means that the pods have the normal typical shape for the variety.

§51.3842 Fairly well formed. "Fairly well formed" means that the pods are not badly crooked, curled, twisted, or otherwise badly misshapen for the variety. Excessively tapered pods caused by unfavorable pollinating or growing conditions shall not be considered as fairly well formed.

"**Badly Misshapen**" means that the pods are badly constricted, crooked, curled, twisted or otherwise badly malformed.

U.S. Fancy: Beans are required to be **Well Formed**.

U.S. No. 1: Beans are required to be **Fairly Well Formed**.

U.S. No. 2: No shape requirement.

Similar Varietal Characteristics (Q)

All three grades require snap beans to be of “similar varietal characteristics.”

§51.3837 Similar varietal characteristics. “Similar varietal characteristics” means that the beans are of the same color and general type. For example, wax and green beans, or Snap and Pole beans may not be mixed.

The inspector should not certify varieties. However, if the similarity between individual beans in a lot varies significantly, the inspector should describe the shape (flat, round, oval), length, color, and general appearance. A sufficiently detailed description should be included on the notesheet to justify reporting a lot out of grade because of dissimilar varietal characteristics.

Sunscald (Q)

The symptoms of beans slightly affected by sunscald are very similar to russeting. However, sunscald occurs only in the field and russeting occurs primarily after harvest. Sunscald occurs only on one side of the pod, but may be slightly delayed in producing symptoms. Russeting, as found in the market may occur anywhere on the pod and generally continues to get worse.

Beans may develop sunscald when exposed to intense sunlight because of loss of some of the leaves or plant position, especially when the soil is wet or the humidity is high.

In the field the first indications of sunscald are very tiny brown or reddish spots upon the exposed surface of the pod. These gradually lengthen until they become streaks, which run across the pod diagonally and may coalesce to form large discolored areas. Sometimes a water-soaked condition precedes the death of affected tissue, however, lacking a greasy exudate, this condition should not be confused with Bacterial Spot or Bacterial Blight.

Beans shall be scored on an appearance basis as damaged or seriously damaged by sunscald keeping in mind the edible and marketing quality.

Dry Rot (C)

Some diseases of beans occur at times as dry types of rot or decay. These diseases may include Blight, Anthracnose, and Soil Rot. Although some of these may develop into soft rot, if there is no soft, wet, sloughing off of tissue at the time of inspection, they cannot be considered soft rot. **When these dry types of rot are found they shall be reported as Dry Rot and scored as damage or serious damage.** When scoring as damage the inspector should virtually score on sight any amount, if identifiable as a dry rot.

§ 51.3841 Damage. ...(a)...Pods having spots due to Blight or Anthracnose, and similar spots caused by other diseases, shall be considered as damaged.

When scoring dry rot as serious damage the effect on the appearance and edible or marketing quality shall be considered.

Soft Rot (C)

Any amount of soft rot is to be scored against the 1% tolerance for soft rot in all grades. All soft rots are characterized by tissue that is soft, wet, and in a stage of decay that sloughs off when rubbed slightly.

Beans are sometimes found to have soft rot accumulated in pockets or “nests” in containers. It is often difficult to get the accurate weight of the defect in this case because of deterioration of the product. In cases of excessive deterioration estimation of actual weight may be permitted, keeping the following instructions in mind.

Since it is not possible to accurately weigh some samples with excessive deterioration by soft rot, each inspector must learn to estimate weights by using the number of beans required to weigh one ounce for the variety. Then, by counting the number of beans affected by the soft rot a fairly accurate estimate of number of ounces may be determined.

Do not report the type of soft rot on the certificate. However, when decay is in excess of the tolerance, report the degree and advancement as: early, moderate, or advanced. Refer to General Inspection Instructions.

Appendix I – U. S. Grade Standards

United States Standards for Grades of Snap Beans¹

Effective July 5, 1990

General

51.3829 General.

Grades

51.3830 U.S. Fancy.

51.3831 U.S. No. 1.

51.3832 (Reserved)

51.3833 U.S. No. 2.

51.3834 (Reserved)

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51.3835 Tolerances.

Application of Tolerances

51.3836 Application of tolerances.

Definitions

51.3837 Similar varietal characteristics.

51.3838 Reasonable size.

51.3839 Well formed.

51.3840 Firm.

51.3841 Damage.

51.3842 Fairly well formed.

51.3843 Overmature.

51.3844 Serious damage.

General

§51.3829 General.

These standards can be applied to all beans used in their entirety as opposed to shelled beans, and includes types such as snap, pole, and wax beans. These standards do not apply to types such as fava, Lima, pinto or calico beans.

Grades

§51.3830 U.S. Fancy.

"U.S. Fancy" consists of beans of similar varietal characteristics which are of reasonable and fairly uniform size, well formed, bright, clean, fresh, young and tender, firm, and which are free from soft rot and free from damage caused by leaves, leafstems, other foreign matter, hail, disease, insects or mechanical or other means. (See §51.3835.)

§51.3831 U.S. No. 1.

"U.S. No. 1" consists of beans of similar varietal characteristics which are of reasonable size, fairly well formed, fairly bright, fresh, fairly young and tender, firm, and which are free from soft rot and free from damage caused by dirt, leaves, leafstems, other foreign matter, hail, disease, insects or mechanical or other means. (See §51.3835.)

§51.3832 [Reserved]

§51.3833 U.S. No. 2.

"U.S. No. 2" consists of beans of similar varietal characteristics which are fairly fresh, firm, not overmature, and which are free from soft rot and free from serious damage caused by dirt, leaves, leafstems, other foreign matter, hail, disease, insects or mechanical or other means. (See §51.3835.)

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

§51.3834 [Reserved]

Tolerances

§51.3835 Tolerances.

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

(a) U.S. Fancy. Ten percent for beans in any lot which fail to meet the requirements of the grade, including not more than 3 percent damage by broken beans. Additionally, within the 10 percent tolerance, not more than 5 percent shall be allowed for defects causing serious damage, including therein, not more than 1 percent for beans affected by soft rot.

(b) U.S. No. 1. Thirteen percent for beans in any lot which fail to meet the requirements of the grade, including not more than 10 percent damage by grade defects other than damage by broken beans, including not more than 5 percent shall be allowed for defects causing serious damage, including therein, not more than 1 percent for beans affected by soft rot.

(c) U.S. No. 2. Fifteen percent for beans in any lot which fail to meet the requirements of the grade, including not more than 10 percent serious damage by grade defects other than serious damage by broken beans, including therein, not more than 1 percent for beans affected by soft rot.

Application of Tolerances

§51.3836 Application of tolerances.

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

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

(b) For a tolerance of less than 10 percent, individual packages may contain not more than double the tolerance specified: **Provided**, That the average for the entire lot is within the tolerance specified for the grade.

Definitions

§51.3837 Similar varietal characteristics.

"Similar varietal characteristics" means that the beans are of the same color and general type. For example, wax and green beans, or Snap and Pole beans may not be mixed.

§51.3838 Reasonable size.

"Reasonable size" means that the pods are not spindly or excessively short for the variety and have not been prematurely picked.

§51.3839 Well formed.

"Well formed" means that the pods have the normal typical shape for the variety.

§51.3840 Firm.

"Firm" means that the pods are not wilted or flabby.

§51.3841 Damage.

(a) "Damage" means any defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the snap bean. Pods having spots due to Blight or Anthracnose, and similar spots caused by other diseases, shall be considered as damaged.

(b) Broken beans shall be considered as damage when:

(1) There is one break present in the thick portion of the bean or one break at each end in the thin portion of the bean;

(2) Any break that is materially affected by dirt or discoloration;

(3) Any break that is ragged and materially detracts from the appearance; or

(4) Unless otherwise specified, the remaining portion of the bean is less than 3-1/2 inches in length (5-1/2 inches for pole type beans).

§51.3842 Fairly well formed.

"Fairly well formed" means that the pods are not badly crooked, curled, twisted, or otherwise badly misshapen for the variety. Excessively tapered pods caused by unfavorable pollinating or growing conditions shall not be considered as fairly well formed.

§51.3843 Overmature.

"Overmature" means that the walls of the pods are distinctly woody or fibrous.

§51.3844 Serious damage.

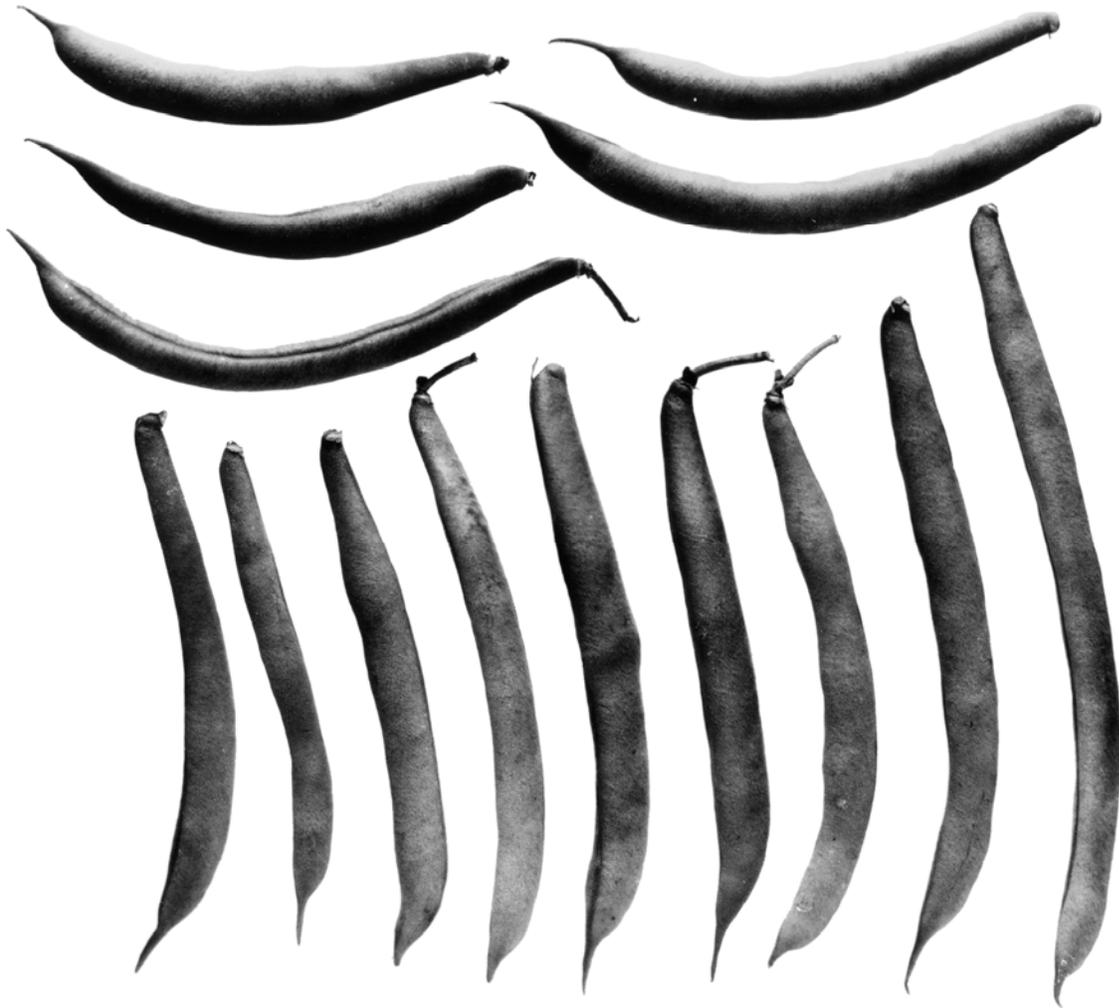
(a) "Serious damage" means any defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the snap bean.

(b) Broken beans shall be considered as serious damage when:

- (1) There is a break on each end in the thick portion of the bean;
- (2) Any break is seriously affected by dirt or discoloration;
- (3) Any break is ragged and seriously detracts from the appearance or exposes a seed; or
- (4) Unless otherwise specified, the remaining portion of the bean is less than 3 inches in length (5 inches for pole type beans).

Appendix II – Visual Aids

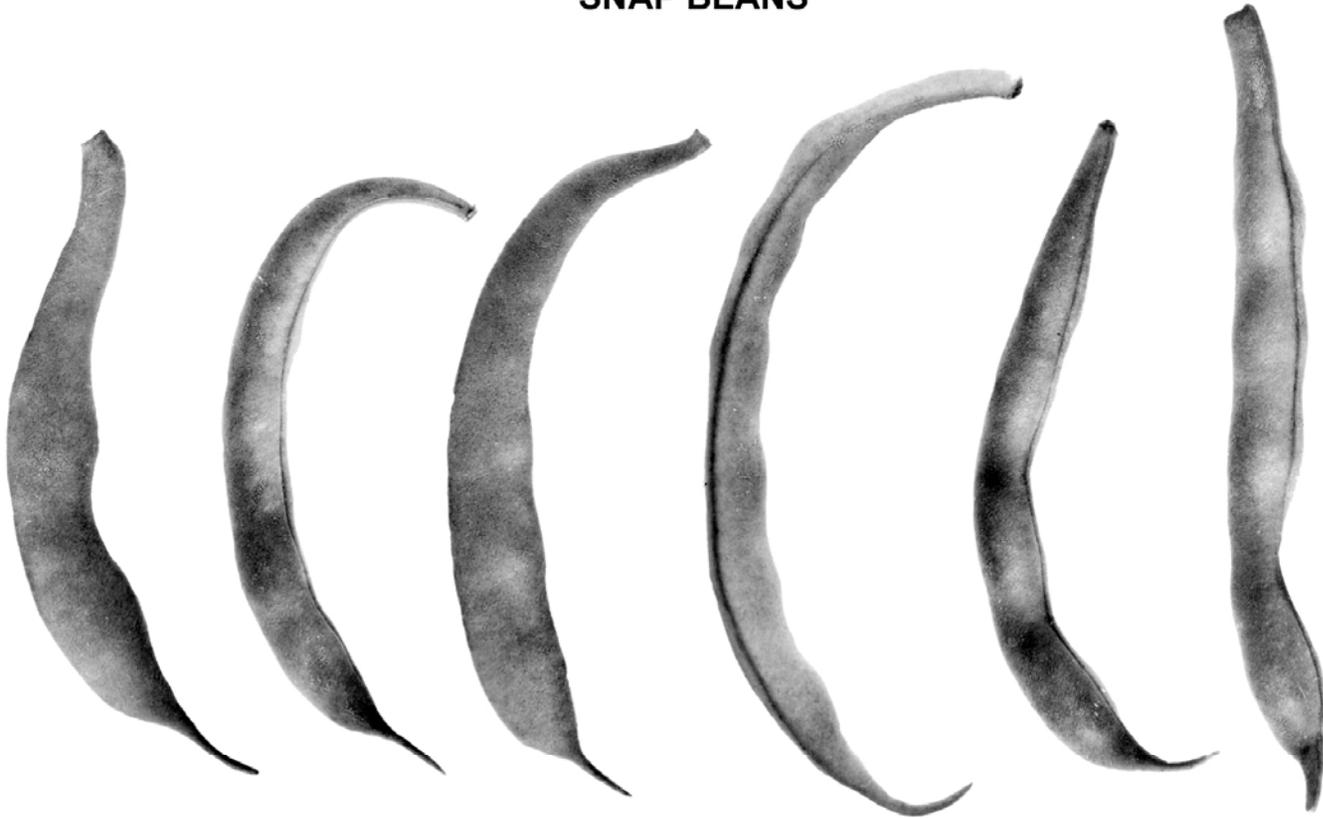
SNAP BEANS



Snap Beans Illustrating Shape for U.S. Fancy

Snap Beans, Photo No. 1
July 1990
(Previously No. 1, no date)

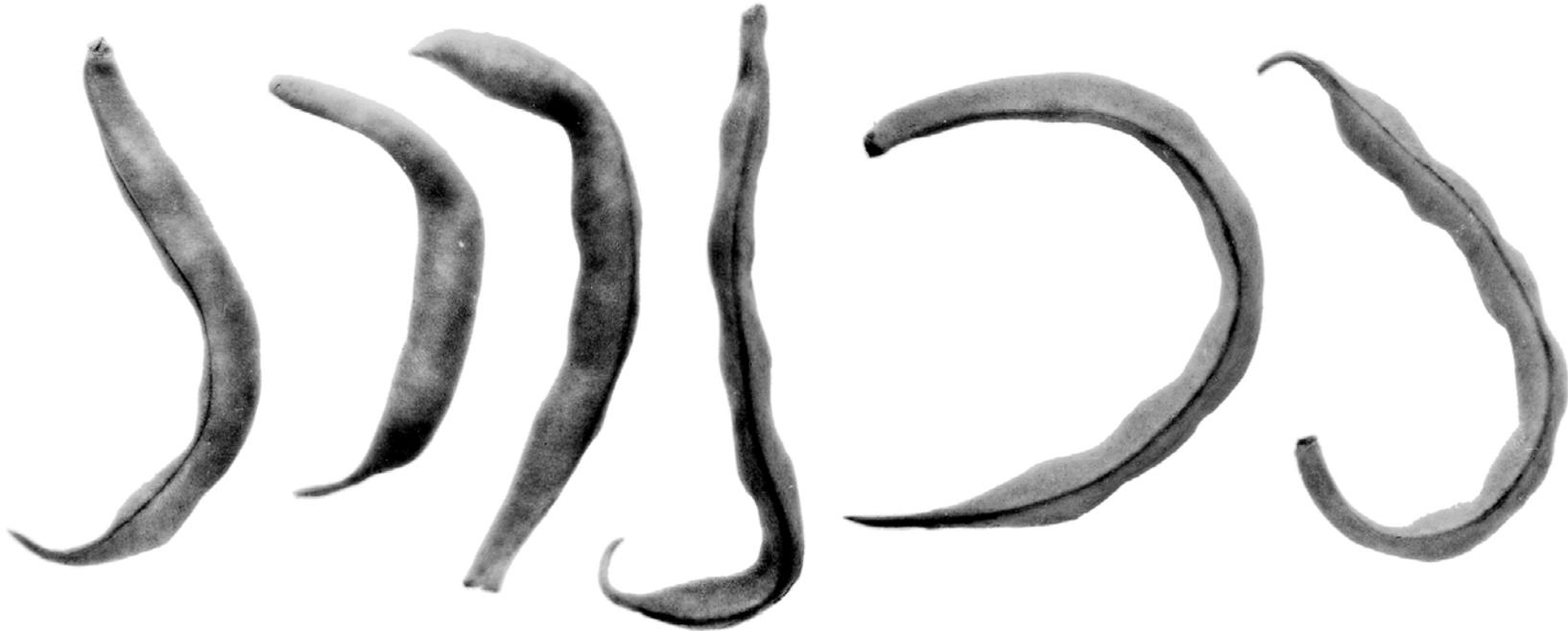
SNAP BEANS



Snap Beans Illustrating Shape for U.S. No. 1.

Snap Beans, Photo No. 2
July 1990
(Previously No. 2, no date)

SNAP BEANS



20

Snap Beans Illustrating Shape for U.S. No. 2

Snap Beans, Photo No. 3
July 1990
(Previously No. 3, no date)

BROKEN BEANS

DAMAGE



ONE BREAK IN THE THICK PORTION



ONE BREAK AT EACH END IN THE THIN PORTION



BREAK THAT IS RAGGED AND MATERIALLY DETRACTS FROM APPEARANCE

ADDITIONALLY, BROKEN BEANS ARE SCORED AS DAMAGED WHEN:

- ANY BREAK IS MATERIALLY AFFECTED BY DIRT OR DISCOLORATION.
- UNLESS OTHERWISE SPECIFIED, REMAINING PORTION IS LESS THAN 3 1/2 INCHES IN LENGTH (5 1/2 INCHES FOR POLE TYPE BEANS.)

SERIOUS DAMAGE



BREAK ON EACH END IN THICK PORTION

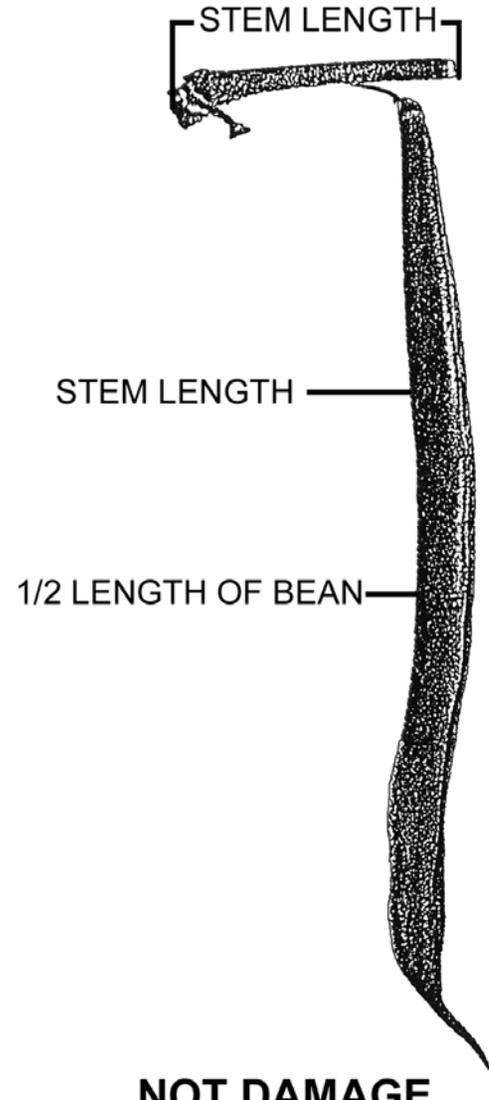
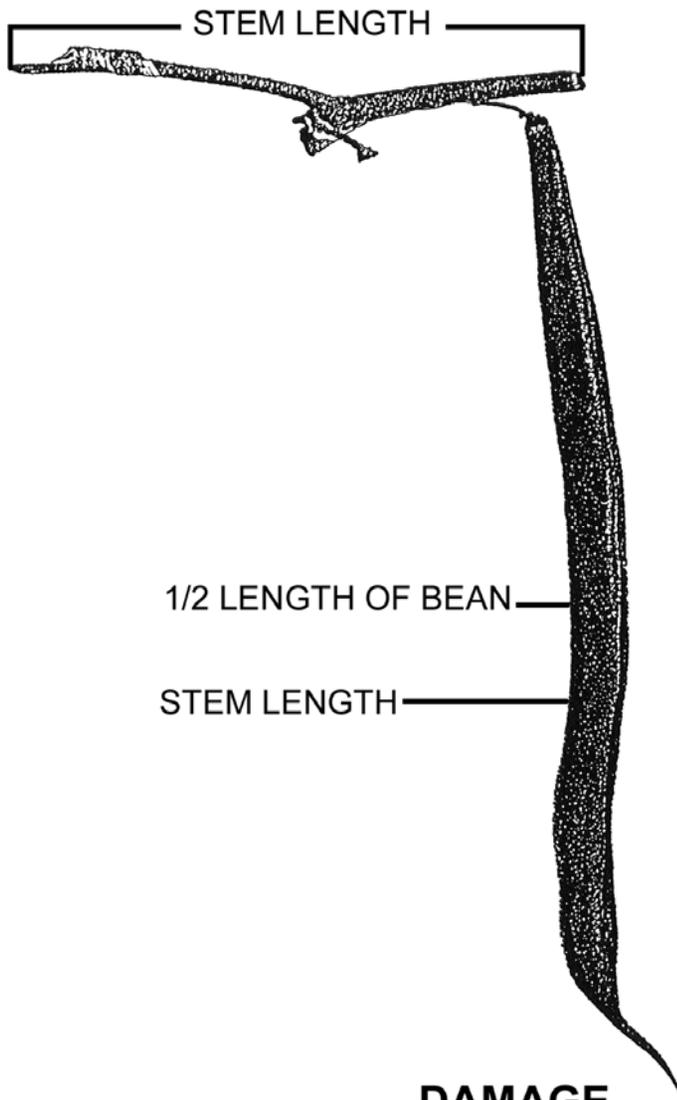


BREAK THAT IS RAGGED AND SERIOUSLY DETRACTS FROM APPEARANCE

ADDITIONALLY, BROKEN BEANS ARE SCORED AS SERIOUS DAMAGE WHEN:

- ANY BREAK IS SERIOUSLY AFFECTED BY DIRT OR DISCOLORATION.
- UNLESS OTHERWISE SPECIFIED REMAINING PORTION IS LESS THAN 3 INCHES IN LENGTH (5 INCHES FOR POLE TYPE BEANS.)

SCORE AS DAMAGE WHEN LEAFSTEM LENGTH IS OVER 1/2 LENGTH OF BEAN



Appendix III – Examples

Shipping Point Certificate

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FEDERAL - STATE INSPECTION CERTIFICATE

This certificate is issued in compliance with the regulations of the Secretary of Agriculture governing the inspection of various products pursuant to the Agricultural Marketing Act of 1946, as amended (7 U.S.C. 1621 et seq.), and the applicable statutes of the State in which issued, and is admissible as prima facie evidence in all courts of the United States and State courts where provided by law.

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. The conduct of all services and the licensing of inspectors/grading/sampling personnel under the regulations governing such services shall be accomplished without discrimination as to race, color, religion, sex, or national origin.

SHIPPER NAME AND ADDRESS: BERT'S BEANS
BEANTOWN, STATE

INSPECTION POINT: BEANTOWN, STATE
 CARRIER: CAR TRUCK TRAILER

SHIPPER NAME AND ADDRESS: SAME
 INITIAL NO OR LICENSE NO: LOT INSPECTION

PRODUCT	INSPECTION BEGUN		INSPECTION COMPLETED		SIZE, COUNT, RANGE, OTHER	DEFECTS, DECAY, SOFT ROT	GRADE
	DATE	TIME	DATE	TIME			
SNAP BEANS	SEPT. 3, 1992	7:00 AM	SEPT. 3, 1992	8:00 AM	Generally 3/2 to 6, Mostly 4 to 6 inches in length	Average within tolerance, No rot	U.S. No. 1
WAX-TYPE SNAP BEANS	SEPT. 3, 1992	8:00 AM	SEPT. 3, 1992	8:00 AM	Generally 4 to 6 (inches in length)	Within tolerance, No soft rot	U.S. No. 1

REMARKS:

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 above described products were inspected and the quality and/or condition as shown by said samples were as herein stated.

Tobias J. Sipes, Jr.
INSPECTOR

WEIGHT: \$ _____
 FEE: \$ _____
 EXPENSES: \$ _____

FORM PV-184 (3-84) Edition of 1-82 may be used.

Inspection Notesheet

CARRIER'S LOT IDENTIFICATION # PREFIX: 36 R. 113 TX NUMBER: 1234568 STATE: TX		LOADING: <input checked="" type="checkbox"/> UNL U.L.	INSPECTION NOTESHEET U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE FRUIT & VEGETABLE DIVISION
Carrier No. Stated by: <i>Shippers Bills</i>		INSPECTION STARTED: m m d d y y Hour Min. A/P 0,2 1,7 9,3 0,7:3,0 A M	CERTIFICATE NUMBER: EXAMPLE 2
Additional Lot ID.: <i>P.O. 1762</i>		Inspection Completed: m m d d y y Hour Min. A/P 0,2 1,7 9,3 0,8:4,5 A M	APPLICANT: <i>M F PRODUCE</i>
Refrigeration Unit: <input type="checkbox"/> ON <input type="checkbox"/> OFF Doors: <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED		Condition of Carrier: <input type="checkbox"/> GOOD <input type="checkbox"/> FAIR <input type="checkbox"/> POOR	Address: <i>Washington DC</i>
Inspection Site: <i>Applicant's Warehouse</i>		SHIPPER: <i>BEANS UNLIMITED</i>	Address: <i>Everywhere, State</i>
A: PRODUCT: <i>Green Round SNAP BEANS</i> NUMBER OF CONTAINERS: <i>600 crates</i> NBP: <i>No</i> TEMPERATURES: <i>45-47° F</i>	BRANDS / MARKS: <i>"Bills Delight Brand, Clinton Packing Corp., Hillary N.C., 1 Bu., Produce of USA."</i>		
B: PRODUCT: <i>Green Round SNAP BEANS</i> NUMBER OF CONTAINERS: <i>75 crates</i> NBP: <i>YES</i> TEMPERATURES: <i>46-48° F</i>	<i>"Georges Finest Brand, Barbs packing House, Houston Texas, 1 Bu., Produce of USA"</i>		
C: PRODUCT: <i>WAX SNAP BEANS</i> NUMBER OF CONTAINERS: <i>75 crates</i> NBP: <i>YES</i> TEMPERATURES: <i>47-48° F</i>	<i>"Ross Brand, RP Packing Co., Nogales, AZ., 1 Bu., Produce of Mexico"</i>		
D: PRODUCT: _____ NUMBER OF CONTAINERS: _____ NBP: _____ TEMPERATURES: _____			
Condition of Load & Containers: <input checked="" type="checkbox"/> STACKED ON PALLETS AT ABOVE LOCATION () INTACT THROUGH LOAD () PARTLY UNLOADED			

Inspection Scoresheet

PAGE:		PAGE:		PAGE:		PAGE:					
WF		WF		WF							
SIZE: 3 1/2 to 8, mostly 4 to 6 inches in length		SIZE: 4 to 7 1/2, mostly 4 1/2 to 6 inches in length		SIZE: 4 1/2 to 8, mostly 5 to 7 inches in length		SIZE:					
SCORESHEET (QUALITY)											
PLI Number	Other ID.	TEMP.	Sample Q%	BROKEN BEAMS D. % SD. %	OTHER D. % SD. %	SR %	RUSSETING D. % SD. %	U.S. -3"	O.S. +8"		
A NONE		45	100	9 9 2 2	3 3 0 0	0 0	5 5 0 0	0	0		
"			100	5 5 1 1	4 4 0 0	0 0	3 3 0 0	0	0		
"			100	3 3 1 1	7 7 1 1	0 0	4 4 0 0	0	0		
"		47	200	18 9 6 3	18 9 6 3	0 0	8 4 2 1	0	0		
"			100	3 3 0 0	4 4 0 0	0 0	0 0 0 0	0	0		
"			100	11 11 2 2	4 4 1 1	1 1	6 6 3 3	0	0		
"		46	100	5 5 0 0	9 9 0 0	0 0	3 3 0 0	0	0		
"			100	7 7 1 1	4 4 2 2	1 1	5 5 1 1	0	0		
			8	(7%) (6%)	(6%) (1%)	(-1%)	(4%) (1%)	0	0		
MISSHAPEN SCARS											
(QUALITY)								WATERLOGGED			
BROKEN BEAMS D. % SD. %								TRANSPARENT	U.S.	O.S.	
OTHER D. % SD. %								SA %	D. % SD. %	-4"	+7 1/2"
B NONE		48	200	3 2 1 1	3 2 0 0	1 1	3 6 18 12 6	0	0		
"		46	100	0 0 0 0	2 2 0 0	0 0	12 12 4 4	0	0		
"		47	100	1 1 0 0	1 1 0 0	0 0	14 14 9 9	0	0		
			3	(1%) (-1/2%)	(2%) (0)	(-1/2)	(15%) (6%)	0	0		
MISSHAPEN SCARS								Scattered throughout pack			
(QUALITY)											
BROKEN BEAMS D. % SD. %											
OTHER D. % SD. %								SR %		U.S. -4"	O.S. +8"
C NONE		48	200	8 4 4 2	14 7 8 4	15 8		0	0		
"		47	100	7 7 5 5	6 6 4 4	0 0		0	0		
"		47	100	6 6 4 4	8 8 4 4	0 0		0	0		
			3	(6%) (4%)	(7%) (4%)	(3%)		0	0		
SCARS								E-Adv., Mo. Adv.			
MISSHAPEN								Stages occurring in nests			
EACH LOT: F + Gen F											
REMARKS / RESTRICTIONS / SPI											
CARLOT Basis: _____				REPORTED TO: MIKE			INSPECTED BY: F.F. Inspector				
HOURLY Basis: _____				DATE: 2/17/93 TIME: 9:00 AM							
TRAVEL Time: _____				REQUESTED BY: MIKE			ASSISTED BY: D. R.				
EXPENSES: _____				DATE: 2/17/93 TIME: 7:00 AM							
NET TOTAL: _____											

Inspection Certificate

CARRIER: 36, R. 1, 13, TX
PREPARED BY: BILLS
SHIPPER: Bills
ADDRESS: P.O. 1763



U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
INSPECTION CERTIFICATE
M - EXAMPLE 2

APPLICANT: M F Produce
ADDRESS: Washington D.C.
SHIPPER: BEANS Unlimited
ADDRESS: Everywhere State
INSPECTION SITE: Applicants Warehouse

LOT	TEMPERATURE	DEFECTS	INSPECTION	APPLICANT'S	SHIPPER'S	INSPECTION	APPLICANT'S	SHIPPER'S	INSPECTION	APPLICANT'S	SHIPPER'S																																										
A	175	0.1	0.1	SNAP BEANS	"Bills Delight"	1 BU.	MIX GREEN ROUND	600 GATES	0	179	30730																																										
B	176	0.1	0.1	SNAP BEANS	"Georges Finest"	1 BU.	TIX GREEN ROUND	75 GATES	0	179	30730																																										
C	177	0.1	0.1	SNAP BEANS	"Ross"	1 BU.	MIX WAX	75 GATES	0	179	30730																																										
D	178	0.1	0.1	SNAP BEANS																																																	
<p>AVERAGE DEFECTS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Quality (Broken Beans)</td> <td>(3 to 11%)</td> <td>3 1/2 to 8 mostly Hite</td> </tr> <tr> <td>Quality (Other) Mashed - Soft</td> <td>(3 to 9%)</td> <td>inches in length.</td> </tr> <tr> <td>Russeting</td> <td></td> <td></td> </tr> <tr> <td>Soft Ref</td> <td></td> <td></td> </tr> <tr> <td>Chexsum</td> <td></td> <td></td> </tr> <tr> <td>Quality (Broken Beans)</td> <td></td> <td></td> </tr> <tr> <td>Quality (Other) Mashed - Soft</td> <td></td> <td></td> </tr> <tr> <td>Washed or Translucent</td> <td>(12 to 18%)</td> <td>4 to 7 1/2 mostly 4 1/2 to 6 inches in length. Washed or translucent beans scattered throughout parcel and lot.</td> </tr> <tr> <td>Soft Ref</td> <td></td> <td></td> </tr> <tr> <td>Chexsum</td> <td></td> <td></td> </tr> <tr> <td>Quality (Broken Beans)</td> <td>(4 to 7%)</td> <td>4 1/2 to 8 mostly 5 to 7 inches in length. Soft ref is early to advanced mostly advanced soft ref and occurring in nests.</td> </tr> <tr> <td>Quality (Other) Mashed - Soft</td> <td>(6 to 8%)</td> <td></td> </tr> <tr> <td>Soft Ref</td> <td>(0 to 8%)</td> <td></td> </tr> <tr> <td>Chexsum</td> <td></td> <td></td> </tr> </table>												Quality (Broken Beans)	(3 to 11%)	3 1/2 to 8 mostly Hite	Quality (Other) Mashed - Soft	(3 to 9%)	inches in length.	Russeting			Soft Ref			Chexsum			Quality (Broken Beans)			Quality (Other) Mashed - Soft			Washed or Translucent	(12 to 18%)	4 to 7 1/2 mostly 4 1/2 to 6 inches in length. Washed or translucent beans scattered throughout parcel and lot.	Soft Ref			Chexsum			Quality (Broken Beans)	(4 to 7%)	4 1/2 to 8 mostly 5 to 7 inches in length. Soft ref is early to advanced mostly advanced soft ref and occurring in nests.	Quality (Other) Mashed - Soft	(6 to 8%)		Soft Ref	(0 to 8%)		Chexsum		
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Soft Ref	(0 to 8%)																																																				
Chexsum																																																					
<p>GRADE: Lots A, B, C fails to grade US No. 1 only amount of condition. Lot C: Fails to grade US No. 1</p> <p>ACCOUNT OF QUALITY DEFECTS:</p>																																																					

INSPECTOR'S SIGNATURE: F. F. Inspector

ESTIMATED TOTAL: Washington D.C. \$

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, a sample of the herein described product was inspected and the quality and/or condition as shown by said samples was as herein stated.