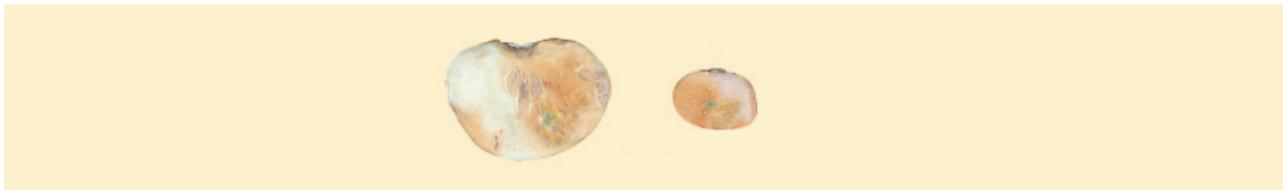




BEANS  
VISUAL  
REFERENCE  
IMAGES

## BEAN-1.0 BADLY DAMAGED



Portion for Analysis: Approximately 500 grams

Beans and pieces of beans that are materially damaged or discolored to the extent that it affects the appearance and the quality. Damage or discoloration must be visible from any position or angle.

APPLICABLE CLASSES: Pea beans and all classes of Lima beans.

## BEAN-2.0 CLEAN-CUT WEEVIL-BORED



### Portion for Analysis: Class Dependent

Clean-cut weevil-bored beans shall be beans and pieces of beans from which weevils have emerged, leaving a clean-cut open cavity free from larvae, webbing, refuse, mold or stain. It is necessary to split the bean to determine if the inside is also clean.

**APPLICABLE CLASSES:** All classes.

**NOTE:** Mung beans may not contain more than 0.1, 0.2 and 0.5 percent clean-cut weevil bored beans in grades U.S. No. 1, 2 and 3, respectively.

## BEAN-2.1 VISIBLE WINDOW DAMAGE (WEEVIL)



### Portion for Analysis: Class Dependent

Visible window damage beans are beans and pieces of beans which are weevil-bored, but the weevil has not emerged from the bean.

APPLICABLE CLASSES: All classes.

**NOTE:** Beans containing 2 or more “visible window damaged beans” are considered contaminated by insect webbing and filth and shall be graded U.S. Sample grade.

## BEAN-3.0 DIRT AND GRIME PEA BEANS (NOT DAMAGE)



Portion for Analysis: Approximately 500 grams

- A. Pea (Navy) beans and pieces of pea beans with dirt adhering to the eye of the bean or seed coat equal to or greater than the coverage and concentration shown.
- B. Pea (Navy) beans and pieces of pea beans with grime adhering to the seed coat equal to or greater than the coverage and concentration shown.

**NOTE:** Determined upon request. Determination based on dirt/grime present on one or both sides of the bean.

## BEAN-3.1 DIRT & GRIME DAMAGE (OTHER THAN PEA BEANS)



### Portion for Analysis: Class Dependent

- A. Beans and pieces of beans with dirt adhering to the seed coat equal to or greater than the coverage and concentration shown.
- B. Beans and pieces of beans with grime adhering to the seed coat equal to or greater than the coverage and concentration shown.

APPLICABLE CLASSES: All classes except Pea beans.

**NOTE:** Determination based on dirt/grime present on one or both sides of the bean. The bean on the left side is the reference for all white/off-white (e.g. Garbanzo and Blackeye beans).

## BEAN-4.0 FROST DAMAGE



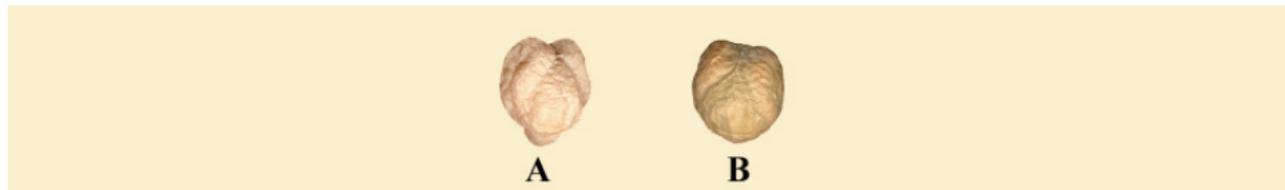
### Portion for Analysis: Class Dependent

Beans and pieces of beans which have been damaged by frost to the extent that the cotyledon has been discolored to the minimum intensity and coverage shown.

APPLICABLE CLASSES: All

**NOTE:** Suspect frost damaged beans can be identified externally by the shriveled, knife-like edge and discoloration that is characteristic of this type damage. Splitting the bean is necessary to determine the extent of damage.

## BEAN-5.0 (GREEN CHICKPEA)



Portion for Analysis: Large seeded 500 grams, Small seeded 250 grams

Immature, Green Chickpeas are undesirable because they tend to produce off flavors and, when canned, turn a grayish color creating a moldy appearance. For this reason, *beans with any discernible amount of green are damage*. (**Suspect kernels may be scraped to confirm discoloration**).

**This illustration is not intended to represent any minimum coverage or color intensity requirement.**

Illustrated from left to right:

A. Shows a natural colored bean.

B. Shows a bean with a discernible green color.

APPLICABLE CLASSES: Garbanzo beans (Chickpeas)

## BEAN-6.0 INSECT STUNG DAMAGE (BLACKEYE)



Portion for Analysis: 250 grams

Beans and pieces of Blackeye beans which have an insect sting(s) meeting one of the following criteria:

**TOP LEFT:** Two or more stings/chalky spots that extend into the cotyledon.

**TOP RIGHT:** A single severe sting with discoloration equal to or greater than the amount shown around the sting which penetrates the cotyledon.

**BOTTOM:** A single chalky-spot equal to or greater than shown.

**NOTE:** Carefully remove seed coat to determine size of spot.

## BEAN-6.1 INSECT STUNG DAMAGE (OTHER BEANS)



### Portion for Analysis: Class Dependent

Beans and pieces of beans that have one severe sting with discoloration equal to or greater than shown, or two or more stings extending into the cotyledon. Remove the seed coat from beans that have several small stings to determine if penetration of the cotyledon has occurred. **DO NOT SCRAPE SINGLE STINGS.**

**APPLICABLE CLASSES:** All classes other than the White and Blackeye beans.

**NOTE:** Chalky spots only apply to Blackeye beans.

## BEAN-6.2 INSECT STUNG DAMAGE (WHITE BEANS)



### Portion for Analysis: Class Dependent

Beans and pieces of beans that have one severe sting with discoloration equal to or greater than shown, or two or more stings extending into the cotyledon. Remove the seed coat from beans that have several small stings to determine if penetration of the cotyledon has occurred. **DO NOT SCRAPE SINGLE STINGS.**

**APPLICABLE CLASSES:** All classes of White beans except, Blackeye beans.

**NOTE:** Chalky spots only apply to Blackeye beans.

## BEAN-7.0 INSECT WEBBING OR FILTH



### Portion for Analysis: Class Dependent

Beans and pieces of beans which contain any webbing, refuse, excreta, dead insects or larvae. To confirm presence of insect/larvae, other than “visible window damage”, it may be necessary to split the bean.

APPLICABLE CLASSES: All

**NOTE:** In addition to functioning as damage, samples containing two or more insect webbing or filth beans are considered U.S. Sample grade.

## BEAN-8.0 WORM EATEN DAMAGE



### Portion for Analysis: Class Dependent

Beans and pieces of beans which have been chewed by insect larvae. Any distinctly chewed bean, regardless of size, is considered damage.

APPLICABLE CLASSES: All

## BEAN-9.0 MOLD DAMAGE



### Portion for Analysis: Class Dependent

Beans and pieces of beans which contain mold on or around the hilum, the surface and/or the cotyledon and is applicable to all classes.

#### Illustration shows:

TOP LEFT: Minimum coverage requirement for surface mold. Surface mold appearing on larger/smaller beans should be proportional.

TOP MIDDLE/RIGHT: Mold on the cotyledon. Beans containing any amount of mold on the cotyledon are damaged.

BOTTOM LEFT: Minimum requirement when mold encircles the hilum.

BOTTOM MIDDLE: Mold covering the hilum and must be completely covered.

BOTTOM RIGHT: Surface mold which discolors the seed coat. Illustrated is the minimum intensity and coverage requirement (proportional to the size of bean being considered).

## BEAN-9.1 MOLD DAMAGE (PINK)



### Portion for Analysis: Class Dependent

Beans and pieces of beans that exhibit a pink to pinkish-brown discoloration on the seed coat with an area of coverage and intensity equal to or greater than shown.

APPLICABLE CLASSES: ALL

**NOTE:** The discoloration may appear on one or both sides of the bean. It is most common in Blackeye beans. Beans containing any amount of mold on the cotyledon are damaged.

## BEAN-10.0 NIGHTSHADE DAMAGE



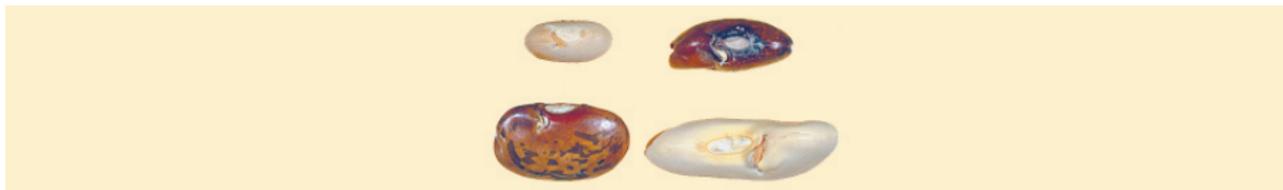
### Portion for Analysis: Class Dependent

Beans and pieces of beans which have nightshade berry juice on its surface, causing dirt and other matter to adhere to the seed coat in an amount/concentration equal to or greater than shown.

APPLICABLE CLASSES: All

**NOTE:** This interpretation also pertains to beans with bag markings/ink stains on the seed coat.

## BEAN-11.0 SPROUT DAMAGE



Portion for Analysis: Class Dependent

Beans and pieces of beans that are sprouted in which the sprout is equal to or greater than shown.

APPLICABLE CLASSES: All

**NOTE:** Do not confuse with partially removed or cracked seed coats.

## BEAN-12.0 WATER BLISTERED DAMAGE



### Portion for Analysis: Class Dependent

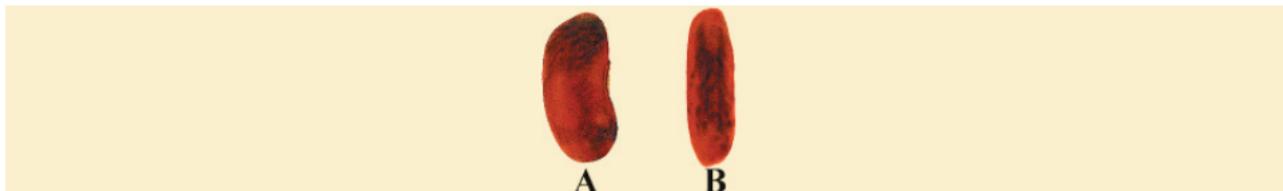
Beans and pieces of beans damaged by water to the degree that the seed coat is discolored to the minimum size and color intensity shown.

Illustrations show minimum coverage and color intensity requirement for:

TOP BEAN:	All classes of white beans.
BOTTOM LEFT:	All classes of colored beans except Pink beans.
BOTTOM RIGHT:	Discolored stored beans (non-white).

APPLICABLE CLASSES: All classes except Pink beans.

## BEAN-12.1 TIGER STRIPE



Portion for Analysis: Approximately 500 grams

Bean and pieces of beans that are not damaged, but have markings on their seed coat at least equal to Bean A and/or Bean B.

Bean A: Striping and/or mottling as shown on either side of the bean.

Bean B: Striping on the outer edge of the bean.

**NOTE:** Determined upon request.

**APPLICABLE CLASSES:** Light Red Kidney beans

## BEAN-12.2 WATER BLISTERED DAMAGE (PINK BEANS)



Portion for Analysis: 250 grams

Beans and pieces of beans damaged by water to the degree that the seed coat is discolored to the minimum size and color intensity shown.

APPLICABLE CLASSES: Pink beans

## BEAN-13.0 DAMAGED (PIECES)



### Portion for Analysis: Class Dependent

Pieces of beans that have grime (left) or dirt (right) on the cotyledon equal to or greater than shown.

**NOTE:** Refer to other ILP's for other types of damage. A damaged piece functions as damage, not splits.

APPLICABLE CLASSES: All

## BEAN-14.0 INTERNAL (RESPIRATION) DAMAGE



### Portion for Analysis: Class Dependent

Beans and pieces of beans damaged by respiration or heating to the degree that the cotyledon is discolored (brown) to the minimum extent shown.

APPLICABLE CLASSES: All

## BEAN-15.0 MACHINE DAMAGE



Portion for Analysis: Class Dependent

Beans and pieces of beans that are either cut or scraped due to handling and contain dirt or grime on the cotyledon equal to or greater than shown.

APPLICABLE CLASSES: All