



SORGHUM  
VISUAL  
REFERENCE  
IMAGES

## S-1.1 GERM DAMAGE (BLEACH METHOD)



### Portion for Analysis: Approximately 15 grams

Sorghum and pieces of sorghum which, after bleaching, have discolored germs that are as dark or darker than shown. Discolored germs that do not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall “prorated” appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, only half of the germ area needs to be discolored.

**NOTE:** Seed coats that occasionally remain attached to the germ area after bleaching must be carefully removed. Scraping too deeply can destroy the evidence of damage and cause non-uniformity of interpretation.

## S-2.0 GROUND AND/OR WEATHER DAMAGE



Portion for Analysis: Approximately 15 grams

Sorghum and pieces of sorghum that have a rough cake-like appearance, and dark stains or discolorations appearing on the seed coat that meet or exceed the area of coverage shown.

Illustration shows from left to right:

Kernel 1: Dark Stain

Kernel 2: Rough cake-like appearance

Kernel 3: Discolored

**NOTE:** 1. Make determination before bleaching.  
2. Do not confuse with mold damage.

## S-3.0 HEAT DAMAGE



**Portion for Analysis: Approximately 30 grams**

Sorghum and pieces of sorghum that are materially discolored and damaged by heat. In most cases, kernels must be cross-sectioned to determine if the exposed starch area is discolored (cream colored) to the extent shown.

**DO NOT “PRORATE” SORGHUM HEAT DAMAGE.** The starchy area of both halves of the cross-sectioned kernel must be as dark or darker than shown.

- NOTE:**
1. When cross-sectioning, cut the kernel length-wise thru the middle of the germ.
  2. Disregard the germ area when making heat damage determinations.

## S-4.0 INSECT BORED DAMAGE



Portion for Analysis: Approximately 15 grams

Kernels which have been bored or tunneled by insects.

**NOTE:** Insect chewed kernels or pieces of kernels are not considered damage. Pin holes in the germ area are considered damage. DO NOT lift the seed coat for further examination. Insect damage is determined before bleaching. However, if a kernel of insect damage is found after bleaching, it is considered damaged.

## S-5.0 MOLD DAMAGE



**Portion for Analysis: Approximately 15 grams**

Sorghum and pieces of sorghum containing surface mold with an area of coverage equal to or greater than the amount present on the kernel to the right.

Sorghum containing mold which penetrates the seed coat regardless of size, is damaged.

- NOTE:**
1. Make determination before bleaching.
  2. Do not confuse with dark stains or discolorations caused by ground and/or weather conditions.

## S-5.1 MOLD DAMAGE (INTERNAL MOLD)



**Portion for Analysis: Approximately 15 grams**

Sorghum and pieces of sorghum that contain penetrating mold. The mold is usually confined to the germ area beneath the bran layer.

- NOTE:**
1. Make determination before bleaching.
  2. A slight blue discoloration of the germ area indicates the possible presence of mold. To confirm the condition, carefully lift the bran layer so as not to destroy evidence of damage.

## S-6.0 SPROUT DAMAGE



Portion for Analysis: Approximately 15 grams

Sorghum and pieces of sorghum in which the sprout protrudes from the germ.

Illustration from left to right:

Kernel 1: The germ cover is broken open with a sprout protruding from the bottom.

Kernel 2: The germ cover is broken open with a sprout showing at the bottom. Sprout has lifted upward extending beyond the surface plane of the germ area.

Kernel 3: The germ cover is broken open with a sprout protruding from the top.

- NOTE:**
1. Sprout damage is determined before bleaching.
  2. Do not confuse with kernels having a split germ (ILP S-7.0).

## S-7.0 SPLIT GERMS (SOUND KERNELS)



**Portion for Analysis: Approximately 15 grams**

Sorghum and pieces of sorghum which have a split over the germ area (but no protruding sprout) are sound kernels unless otherwise damaged.

**NOTE:** Do not confuse with sprout damage(ILP S-6.0).

## S-8.0 PURPLE PIGMENT DAMAGE



**Portion for Analysis: Approximately 15 grams**

Sorghum and pieces of sorghum which are materially discolored by purple pigment. The color intensity and area of coverage must be equal to or worse than shown. DO NOT “PRORATE” THIS TYPE OF DAMAGE.

- NOTE:**
1. Make determination before bleaching.
  2. Disregard the germ area when making this determination.

## S-9.0 TANNIN SORGHUM (BLEACHED)



Portion for Analysis: Approximately 15 grams

For classing purposes, bleached Tannin sorghum must have a pigmented testa which shows a dark color and area of coverage on the back of the kernel (singularly or in combination) equal to or greater than shown. **Do Not Prorate Area Of Coverage.**

KERNEL A: Bleached Tannin (brown seed coat).

KERNEL B: Bleached Tannin (white seed coat).

KERNEL C: Cross-sectioned Tannin Kernel, shows dark testa layer and white starch.

KERNEL D: Cross-sectioned weathered sorghum, shows absence of testa layer and purplish/creamy appearance.

**NOTE:** Sorghum kernels exposed to mold, insect, weather, or stress may exhibit similar dark spots depicted on kernels A and B. If this condition exist, it may be necessary to cross-section questionable kernels to verify it is Tannin.

## (S) O.F.-16.0 NON-GRAIN SORGHUM



**Portion for Analysis: Approximately 30 grams**

A shiny red, black, lemon yellow, or buff colored round-type kernel generally with tightly clasped hulls. Kernels are smaller in size but more elongated than a sorghum kernel.

## (S) O.F.-33.0 WHITE SORGHUM



**Portion for Analysis: Approximately 15 grams**

Sorghum with white or translucent pericarps containing spots which singularly, or in combination, cover 25 percent or less of the kernel.

- A. Single spot with 25% or less total coverage.
- B. Combination spots (front & back) with 25% or less total coverage.