



BARLEY
VISUAL
REFERENCE
IMAGES

B-1.0 BLIGHT DAMAGE



Portion for Analysis: Approximately 25 grams

Kernels and pieces of kernels affected with blight to the extent that the discoloration covers at least one-third of the surface area shown (singularly or in combination) with an intensity equal to or greater than shown.

NOTE: Blight is considered damage in all classes of Barley. Do not confuse blight damage with badly stained, weathered, or water-stained kernels. Six-rowed Malting Barley may not contain more than 4.0% blight/mold damage (Refer to B-1.1 Mold Damage). More than 4.0% of blight and/or mold makes the special grade “blighted”.

B-1.1 MOLD DAMAGE



Portion for Analysis: Approximately 25 grams

Kernels and pieces of kernels in which the discoloration is spotted or blotched. Discoloration may appear on one or both sides but must be equal to or greater than the combined surface area depicted on both kernels.

NOTE: Mold is considered damage in all classes of Barley. Two-rowed Malting Barley may not contain more than 0.4% mold damage. More than 4.0% of blight and/or mold damaged kernels makes the special grade “blighted” (Refer to B-1.0 for Blight Damage).

B-3.0 INJURED-BY-FROST



Portion for Analysis: Approximately 25 grams

Kernels and pieces of kernels that are distinctly indented, immature or shrunken, or discolored as a result of frost.

NOTE: Injured-By-Frost (IBF) is a malting factor only and does not function as damage or against sound barley. Malting barley may not contain more than 1.9% IBF damage.

B-3.1 FROST DAMAGE



Portion for Analysis: Approximately 25 grams

Kernels and pieces of barley (with or without the hull) that are distinctly discolored green, brown, or black to the minimum intensity shown are considered damage.

Illustration shows from left to right:

Kernel 1: The minimum degree of discoloration for green.

Kernel 2: The minimum degree of discoloration for brown or black.

NOTE: Kernels are usually shrunken or indented. Malting barley may not contain more than 0.4% frost damage.

B-4.0 GERM DAMAGE (DISCOLORED AND/OR MOLD)



Portion for Analysis: Approximately 25 grams

Kernels that have discolored or moldy germs as a result of respiration. Scrape the germs carefully to avoid scraping too deeply and destroying the evidence of damage.

Illustration shows from left to right:

Kernel 1: Kernels and pieces of barley that have discolored germs as dark or darker than shown shall be damaged.

NOTE: 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.

Kernel 2: Kernels containing any amount of mold shall be damage.

NOTE: Mold occurs in many colors other than shown.

B-5.0 INJURED-BY-HEAT



Portion for Analysis: Approximately 50 grams (+/- 1.5 grams)

Kernels and pieces of barley which, after the standardized one-third pearl, are slightly discolored to the extent shown are considered Injured-By-Heat (IBHT).

Illustration shows from left to right:

Kernel 1: Minimum color intensity for barley (90.0% or more kernels with White Aleurone layers).

Kernel 2: Minimum color intensity for blue barley (90.0% or more kernels with Blue aleurone layers).

NOTE: Malting barley may not contain more than 0.2% IBHT.

Do not confuse with heat-damaged barley.

B-5.1 HEAT DAMAGED



Portion for Analysis: Approximately 50 grams (+/-1.5 grams)

Kernels and pieces of barley which, after the standardized full pearl, are materially discolored (red, black, or brown) to the minimum extent shown when viewed from the top.

Illustration shows from left to right:

Kernel 1: Minimum color intensity for Blue barley (90.0% or more kernels with Blue aleurone layers).

Kernel 2: Minimum color intensity for barley other than Blue barley.

NOTE: Do Not Prorate. Malting barley may not contain more than 0.1% heat-damaged kernels.

B-6.0 WEEVIL OR INSECT-BORED



Portion for Analysis: Approximately 25 grams

Kernels and pieces of barley that have been bored or tunneled by insects.

Illustration shows from left to right:

Kernel 1: Kernel which has been tunneled.

Kernels 2 & 3: Kernels which have been bored.

B-7.0 INJURED-BY-MOLD



Portion for Analysis: Approximately 25 grams

Kernels and pieces of barley that contain slight amounts of mold equivalent to the minimum degree shown or have a slightly weathered appearance are considered Injured-By-Mold (IBM).

NOTE: IBM is a malting factor in Two-rowed barley and does not function as damage or against sound barley. Malting barley may not contain more than 1.9% IBM. Mold can be any color.

B-8.0 SPROUT DAMAGE



Portion for Analysis: Approximately 25 grams

Kernels and pieces of barley that have sprouted or have swelling over the germ and, after examination, show sprout.

Illustration shows from left to right:

Kernel 1: Kernel showing visible sprout at the bottom of the germ area.

Kernel 2: Kernels which, after careful removal of the seed coat, show any evidence of movement in the germ area. The “sprout” may move towards the top or bottom of the germ or lift upward leaving space between the sprout and germ cavity.

NOTE: Swelling over the germ area may or may not be an indication of sprout.

(B) O.F.-2.1 SKINNED AND BROKEN



Portion for Analysis: Approximately 25 grams

Illustration shows from left to right; top to bottom.

Barley in which part of the germ is missing or the hull is:

1. Loose over the germ area on both sides and the front.
2. Has one-third or more missing from the kernel.
3. Is missing or split over the germ area (Germ area must be visible when viewing from the top only).
4. More than one-fourth of the kernel is broken off.
- 5 & 6. Is skinned on both sides of the kernel.

(B) O.F.-2.3 A. TWO-ROWED & B. SIX ROWED



Portion for Analysis: Approximately 25 grams

Illustration shows from left to right:

Kernels 1 & 2: Two-rowed Barley is usually characterized by plump, symmetrical shaped kernels with creases straight down the center of the kernels. Two-rowed Barley often has a slightly wrinkled, thinner skin.

Kernels 3-8: Six-rowed Barley is usually characterized by irregularly shaped kernels. The creases in approximately 2/3 of the kernels in Six-rowed Barley are twisted, and the creases in approximately 1/3 of the kernels are straight. The Six-rowed Barley skin is usually thicker, and the veins are usually more prominent than Two-rowed Barley.

B-O.F.-2.4 INJURED-BY-SPROUT



Sprout present

Sprouted

Socket

2/3 or more
germ missing

Germ missing

Portion for Analysis: Approximately 55 grams

Kernels and broken kernels of barley which, after pearling, contain a visible germ area showing evidence of sprout, sprout socket, or a significant portion of the germ missing (2/3 or more) are considered “Injured-by-Sprout” (IBS). Also consider kernels as IBS if the germ area has been broken off and the remaining kernel is at least 2/3 of a whole kernel.

Note: Injured-by-Sprout does not function as damage.

NOT INJURED-BY-SPROUT



Germ present
(whole or broken kernel)

Germ broken off
(less than 2/3 of a whole kernel)